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OBSERVATIONS OF SOLAR FLUX AT THE ALGONQUIN RADIO OBSERVATORY ON 2800 MHz AND THE DOMINION RADIO ASTROPHYSICAL OBSERVATORY ON 2700 MHz MONTHLY REPORTS JANUARY 1983 - DECEMBER 1983

M.B. BELL, H.P. GAGNON, AND J.D. MOORE

REPORT NO. ARO - 13

NRCC NO. 23062

FEBRUARY 1984

HERZBERG INSTITUTE
OF ASTROPHYSICS

INSTITUT HERZBERG
D'ASTROPHYSIQUE

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ABSTRACT

Daily tabulations of the radio flux at 2800 MHz from the Algonquin Radio Observatory (ARO) and at 2700 MHz from the Dominion Radio Astrophysical Observatory (DRAO) are presented for the year 1983. This period marks the eighth year into sunspot cycle 21.

RÉSUMÉ

Présentation des tables quotidiennes du flux radio à 2800 MHz par l'Observatoire radioastronomique d'Algonquin et à 2700 MHz par l'Observatoir fédéral de radioastrophysique pour l'année 1983, période couvrant la huitième année du cycle 21 de taches solaires.

OBSERVATIONS OF SOLAR FLUX AT THE ALGONQUIN RADIO OBSERVATORY ON 2800 MHz AND THE DOMINION RADIO ASTROPHYSICAL OBSERVATORY ON 2700 MHz

Monthly Reports, January 1983 - December 1983

INTRODUCTION

Tabulations of the daily values of radio solar flux and burst characteristics are listed on a monthly basis after visual examination of the records obtained from the Algonquin Radio Observatory (ARO) and from the Dominion Radio Astrophysical Observatory (DRAO) on 2800 MHz and 2700 MHz respectively. A description of burst types can be found in ARO Report No. 4 which includes extra terms introduced as required by the recommendations of Commission 10 of the International Astronomical Union. The ARO solar site was converted to computer operation in November 1977 and in preparing the Ottawa report, interesting large bursts recorded at ARO are now plotted by computer to a time resolution equal to that obtained on the original record which is in the order of 1 s.

A bibliography of internal reports related to the data is given in a Publication of the Astrophysics Branch (PAB), Vol. 1(2), June 1973.

Tabulated Data

Daily values of solar flux at 2800 mcs recorded at National Research Council. A collection of monthly and annual publications available in the Canada Institute for Scientific and Technical Information (formerly the National Science Library) under call number QB475,N27.

Vol. 1 1946 - June 1955, Series A.

Vol. 2 July 1955 - December 1959. Series A revised and Series B starts.

Vol. 3 January 1960 -July 1964. Series B

Vol. 4 August 1964 - December 1966. Series B until December 1965, then Series C.

Vol. 5 January 1967 - December 1969. Series C. Contains Radio and Electrical Engineering Division Unclassified Report ERB-790 with extensive descriptive text for calibration and burst descriptions.

Vol. 6 January 1970 - December 1972. Series C. Contains Astrophysics Branch Report, PAB Vol. 1, No. 2 with extensive Bibliography of NRC Divisional Reports relating to the 2800 MHz Solar Noise Program of total flux measurements.

Vol. 7 January 1973 - December 1976. Series C. Contains Report No. ARO 4 of the Herzberg Institute of Astrophysics with a revised schematic of idealized burst profiles compatible with the IAU Instruction Manual and a select bibliography with comments to show the evolutionary appearance of the Ottawa types. Also contains PAB Vol. 1, No. 4 with E-W solar strip scans of the sun at 10-7 cm from June 1968 to December 1973.

ARO-5 August 1977. A Working Collection of Daily 2800 MHz Solar Flux Values (1946 - 1976).

ARO-6 June 1979. Historical Background for the 1970 Absolute Calibration of Solar Flux Density at 2800 MHz and Reprint of Final Report to Members of the URSI Working Party.

ARO-7 April 1980. Observations of Solar Flux at the Algonquin Radio Observatory on 2800 MHz and the Dominion Radio Astrophysical Observatory on 2700 MHz Monthly Reports, January 1977 - December 1978.

ARO-8 June 1980. East-West Solar Scans at 10-cm Wavelength Taken at the Algonquin Radio Observatory January 1974 to December 1979.

ARO-9 September 1980. Observations of Solar Flux at the Algonquin Radio Observatory on 2800 MHz and the Dominion Radio Astrophysical Observatory on 2700 MHz Monthly reports, January 1979 - December 1979.

ARO-10 June 1981. Observations of Solar Flux at the Algonquin Radio Observatory on 2800 MHz and the Dominion Radio Astrophysical Observatory on 2700 MHz Monthly Reports, January 1980 - December 1980.

ARO-11 March 1982. Observations of Solar Flux at the Algonquin Radio Observatory on 2800 MHz and the Dominion Radio Astrophysical Observatory on 2700 MHz Monthly Reports, January 1981 - December 1981.

ARO-12 March 1983. Observations of Solar Flux at the Algonquin Radio Observatory on 2800 MHz and the Dominion Radio Astrophysical Observatory on 2700 MHz Monthly Reports, January 1982 - December 1982.

January 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
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CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Jan.	Series C	Series C	Series D
1	135.9	131.4	118.3
2	135.9	131.4	118.3
3	140.8	136.2	122.6
4	142.9	138.2	124.4
5	159.9	154.6	139.1
6	167.1#	161.6#	145.4#
7	168.9	163.3	147.0
8	161.2#	155.9#	140.3#
9	155.1	150.0	135.0
10	149.1	144.2	129.8
11	144.1	139.3	125.4
12	140.3	135.7	122.1
13	139.7	135.1	121.6
14	141.9	137.2	123.5
15	145.8	141.0	126.9
16	144.8	140.2	126.2
17	142.6	138.0	124.2
18	139.3	134.8	121.3
19	131.6	127.4	114.7
20	124.5	120.5	108.4
21	119.9	116.1	104.5
22	117.1	113.5	102.1
23	119.1	115.4	103.9
24	117.7	114.1	102.7
25	126.6	122.7	110.4
26	136.8	132.6	119.3
27	137.7	133.6	120.2
28	144.9	140.6	126.5
29	153.5	148.9	134.0
30	159.6	154.8	139.3
31	166.7	161.9	145.7
Mean:	142.3	137.7	124.0

Corrected for burst.

January 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Jan.	14:00	17:00	20:00	19:35
1	135.7	135.9	138.2	-----
2	132.6	135.9	138.2	-----
3	138.7	140.8	141.5	-----
4	141.0	142.9	146.7	146.5
5	158.0	159.9	165.0	160.9
6	166.1	167.1#	167.7	164.6
7	175.4	168.9	167.7	166.5
8	158.8	161.2#	162.0	-----
9	148.5	155.1	154.9	-----
10	149.4	149.1	151.2	150.2
11	143.6	144.1	145.2	143.0
12	137.2	140.3	142.6#	143.2#
13	138.4	139.7	142.6#	143.5#
14	138.8	141.9	143.6	143.2
15	140.7	145.8	147.7	-----
16	141.3	144.8	146.9	-----
17	140.7	142.6	145.4	142.9
18	140.4	139.3	139.7	139.6
19	130.9	131.6	131.7	132.6
20	122.3	124.5	125.1	124.9
21	118.1	119.9	120.2	118.5
22	115.6	117.1	118.2	-----
23	118.7	119.1	120.9	-----
24	115.4	117.7	118.9	116.9
25	122.9	126.6	130.9	128.3
26	133.7	136.8	137.5	136.8
27	135.4	137.7	140.7	137.6#
28	140.4	144.9	146.2	145.5
29	150.3	153.5	156.3#	-----
30	159.3	159.6	162.6	-----
31	157.7	166.7	167.9	164.6#
Mean:	140.2	142.3	144.0	142.5

Corrected for burst.

January 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jan.				H M	H M	MINUTES		
1	1	S	Simple I	18 53	18 54.5	7	2.4	0.9
2	240	R	Rise Only	15 05	15 20	15	2.8	1.4**
4	1	S	Simple I	20 45	20 46	4	2.4	0.8
5	20	GRF	SimpIII GRF	17 55	18 20	65	2.4	1.2
6	21	GRF	SimpIIIA GRF	15 00	17 00	270	5.2	3.4
	20	GRF	SimpIII GRF	17 18	17 22	27	2.6	1.3
7	26A	FAL	Fall A	14 40	17 15	155	-6.6	-3.3**
	1	S	Simple I	15 26	15 28	4	2.6	1.2**
	20	GRF	SimpIII GRF	16 00	16 05	30	2.6	1.3**
8	21	GRF	SimpIIIA GRF	13 40	13 50	20	3.8	1.9**
	4	S/F	Simple IIF	13 44	13 45.2	2	12.4	---**
	22	GRF	SimpIIIF GRF	14 10	14 40	150	9.8	3.8**
	20	GRF	SimpIII GRF	16 45	17 00	35	2.6	1.3**
9	240	R	Rise Only	16 00	16 20	20	4.6	3.0**
10	2	S/F	Simple IF	13 51.8	13 52.1	1.2	4.6	2.3**
	20	GRF	SimpIII GRF	17 25	17 45	85	4.6	2.3
11	20	GRF	SimpIII GRF	16 35	17 35	135	2.8	1.3
12	240	R	Rise Only	14 25	15 00	35	3.0	1.5**
	1	S	Simple I	17 57	17 58.2	4	3.0	1.4
	22	GRF	SimpIIIF GRF	19 10	20 25	100	2.0	---
	1	S	Simple I	21 28	21 29	2	2.4	1.2*
13	20	GRF	SimpIII GRF	18 00	19 10	235	16.6	8.3
15	240	R	Rise Only	14 45	15 55	70	5.4	2.4*
	20	GRF	SimpIII GRF	17 45	18 00	40	2.4	1.2
16	240	R	Rise Only	14 45	14 48	3	1.6	0.8**
	240	R	Rise Only	16 20	16 35	15	1.6	0.8**
17	1	S	Simple I	18 32	18 32.5	1	2.8	1.2
	20	GRF	SimpIII GRF	20 25	21 10	55	2.2	1.2
	2	S/F	Simple IF	21 29.5	21 30.9	3.3	6.4	3.2*
20	20	GRF	SimpIII GRF	18 37	18 39	20	1.8	0.9
24	240A	R	Rise Only A	15 45	16 20	35	2.4	1.2**
	1	S	Simple I	15 57	15 59.2	10	2.4	1.0**
	20	GRF	SimpIII GRF	17 00	18 25	140	3.4	1.5
	1	S	Simple I	21 22	21 24	5	2.6	1.0*
26	20	GRF	SimpIII GRF	15 35	16 17	75	2.6	1.3**
	22	GRF	SimpIIIF GRF	21 10	21 55	60	2.4	1.0*

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

January 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jan.				H M	H M	MINUTES		
27	20	GRF	SimpIII GRF	18 00	19 27	125	2.6	1.3
	2	S/F	Simple IF	21 25	21 25.2	1	6.2	1.6
28	240A	R	Rise Only A	14 30	14 40	10	2.8	---**
	3	S	Simple II	14 34.2	14 34.7	4	11.4	2.8**
	1	S	Simple I	23 09	23 09.1	1.2	7.8	1.9*
29	240	R	Rise Only	18 39	18 42	3	2.8	1.2
	23	GRF	SimpIIIAF GRF	19 10	19 34	120	6.0	---
	3	S	Simple II	19 32.5	19 33	1.2	10.4	5.0
30	1	S	Simple I	15 47	15 49	7	2.2	1.1**
31	240	R	Rise Only	16 20	16 45	25	5.0	2.5**
	20	GRF	SimpIII GRF	18 45	19 00	75	4.6	2.3

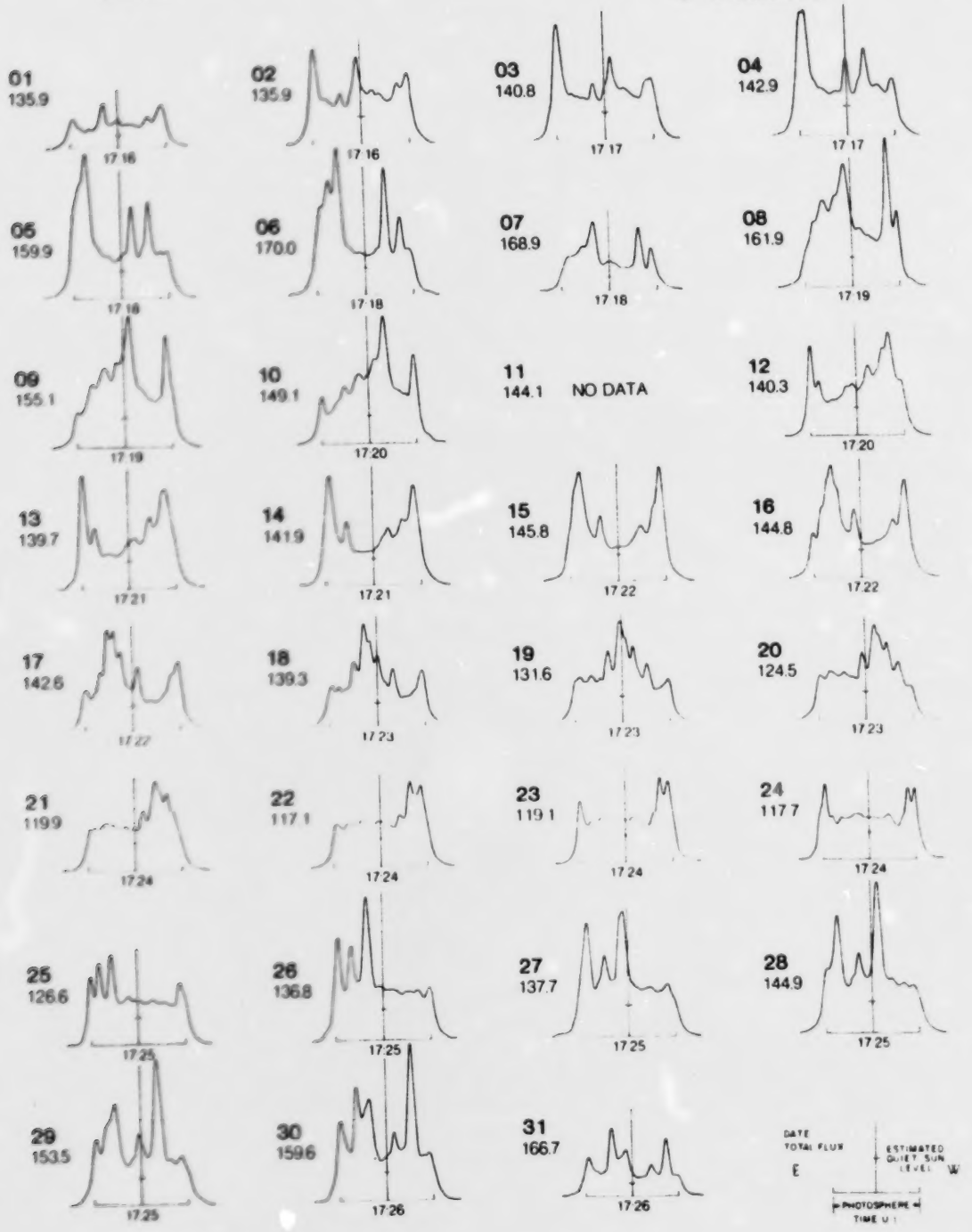
* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

EAST-WEST SOLAR SCANS

JANUARY 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



February 1983

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OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Feb.	Series C	Series C	Series D
1	167.5	162.6	146.3
2	161.2#	156.5#	140.8#
3	149.8	145.5	130.9
4	161.3	156.8	141.1
5	158.7#	154.3#	138.9#
6	156.7	152.3	137.1
7	146.1	142.2	128.0
8	137.0	133.3	120.0
9	125.3	121.9	109.7
10	116.4	113.4	102.1
11	109.8	106.9	96.2
12	102.5	99.8	89.8
13	97.9	95.5	85.9
14	94.1	91.7	82.5
15	90.8	88.5	79.6
16	91.9	89.7	80.7
17	94.2	91.9	82.7
18	99.5	97.2	87.5
19	96.8	94.6	85.1
20	99.5	97.3	87.6
21	103.9	101.6	91.4
22	108.6	106.2	95.6
23	114.4	112.0	100.8
24	116.8	114.3	102.9
25	122.8	120.3	108.3
26	128.8	126.2	113.6
27	141.0	138.3	124.5
28	140.3	137.6	123.8
Mean:	122.6	119.6	107.6

Corrected for burst.

February 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Feb.	14:00	17:00	20:00	19:35
1	166.7	167.5	169.8	168.2#
2	161.0	161.2#	159.1	159.5
3	146.8	149.8	156.2	156.6
4	160.6	161.3	161.3	163.1
5	158.9	158.7#	159.4#	-----
6	156.6	156.7	158.4	-----
7	144.5	146.1	147.5	145.5
8	137.0	137.0	136.0	133.8
9	127.0	125.3	126.2	125.2
10	115.9	116.4	116.4	115.2
11	111.7#	109.8	109.1	107.7
12	102.6	102.5	102.7	-----
13	97.2	97.9	97.5	-----
14	94.6	94.1	93.5	91.8
15	91.3	90.8	90.9	89.5
16	90.7	91.9	93.0	91.5
17	93.9	94.2	94.6	93.1
18	96.6	99.5	101.3#	99.1
19	97.0	96.8	98.2	-----
20	98.4	99.5	99.8	-----
21	102.9	103.9	104.2	102.9
22	107.3	108.6	109.2#	-----
23	111.8	114.4	113.9	112.5
24	114.7	116.8	118.1#	116.3#
25	120.6	122.8	124.8	123.8
26	126.8	128.8	126.6	-----
27	137.5	141.0	141.6#	-----
28	139.8#	140.3	145.4	144.7
Mean:	121.8	122.6	123.4	123.2

Corrected for burst.

February 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS		START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Feb.				H M	H M	MINUTES		
1	┌21	GRF	SimpIIIA GRF	17 50	19 03	185	18.2	6.0
	└ 1	S	Simple I	18 54	18 56	5	6.4	2.8
2	20	GRF	SimpIII GRF	14 45	16 00	205	5.2	2.5
3	240	R	Rise Only	17 46	17 50	4	1.8	0.9
	20	GRF	SimpIII GRF	18 50	18 55	20	3.6	1.8
	┌240A	R	Rise Only A	18 30	18 40	10	2.8	1.4
	└40	F	Fluctuations	18 33.5	18 34.6	1.5	3.6	---
4	┌23	GRF	SimpIIIAF GRF	14 05	14 45	170	5.6	3.2**
	└ 2	S/F	Simple IF	16 29	16 32.2	8	7.4	3.4**
	┌21	GRF	SimpIIIA GRF	17 30	18 30	105	6.2	3.1
	└ 1	S	Simple I	17 32	17 33	8	2.6	1.3
	1	S	Simple I	19 46	19 46.7	2	3.0	1.5
	260	FAL	Fall Only	21 40	22 00	20	-2.8	-1.8
	3	S	Simple II	22 42.5	22 43	3	16.8	5.6*
5	┌21	GRF	SimpIIIA GRF	13 32	Indet.	17	3.8	---**
	└40	F	Fluctuations	13 36	13 40.7	9	5.6	---**
	┌23	GRF	SimpIIIAF GRF	16 10	17 49	305	13.0	---
	│ 3	S	Simple II	16 22.2	16 22.7	2.5	13.0	4.8
	└22	GRF	SimpIIIF GRF	17 33	17 33.5	11	8.4	4.0
6	20	GRF	SimpIII GRF	18 52	18 54	28	3.0	1.6
7	20	GRF	SimpIII GRF	15 45	16 35	105	2.6	1.9**
	┌21	GRF	SimpIIIA GRF	20 25	20 45	90	3.0	1.6
	│ 3	S	Simple II	20 29.2	20 29.5	1	10.4	2.8
	└ 1	S	Simple I	20 32	20 32.6	1.5	3.2	1.1
8	┌46F	C	Complex F (-)	22 16	23 12	73	54.0	24.2*
	└29	PBI	P.B. Increase	23 29	23 29	>30	15.4	---*
9	┌21	GRF	SimpIIIA GRF	22 10	22 25	30	2.4	1.2*
	└45	C	Complex (-)	22 17.8	22 19	6	10.4	3.6*
10	32	ABS	Absorption	18 00	18 25	40	-2.4	-1.2
11	46F	C	Complex F (-)	13 05	13 10	32	26.0	9.4**
	20	GRF	SimpIII GRF	13 38	14 45	180	26.0	---**
12	20	GRF	SimpIII GRF	22 30	23 20	>90	6.4	---*
18	20	GRF	SimpIII GRF	17 20	18 00	80	1.8	0.9
	20	GRF	SimpIII GRF	19 45	20 50	125	2.2	1.4
22	┌21	GRF	SimpIIIA GRF	19 15	19 55	240	7.0	3.5
	│ 4	S/F	Simple IIF	19 25.5	19 33	27	180.0	25.6

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

February 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Feb.			H M	H M	MINUTES		
22	4	S/F	Simple IIF	20 05.5	20 08	5.5	38.0	8.6*
23	1	S	Simple I	21 02	21 03	3	3.2	1.1
24	21	GRF	SimpIIIA GRF	18 35	21 45	320	6.0	3.0
	4	S/F	Simple IIF	18 44.5	18 48.4	7.5	23.0	12.0
	29	PBI	P.B. Increase	18 52	18 52	25	4.8	2.0
25	21	GRF	SimpIIIA GRF	20 28	21 20	170	9.6	4.8
	4	S/F	Simple IIF	20 28.5	20 33	13	41.0	13.
	1	S	Simple I	20 43	20 46	6	2.2	1.1
	1	S	Simple I	21 00	21 01	5	2.2	1.0
26	22	GRF	SimpIIIF GRF	21 50	23 30	>150	6.8	---*
27	20	GRF	SimpIII GRF	17 40	18 10	75	2.0	1.2
	21	GRF	SimpIIIA GRF	19 30	19 50	60	1.8	1.0
	2	S/F	Simple IF	20 00.6	20 01	1	4.8	---
	8	S	Spike	21 19.3	21 19.4	0.2	2.8	---
	21	GRF	SimpIIIA GRF	21 40	22 20	100	5.0	3.2
	20	GRF	SimpIII GRF	21 58	22 01.5	11	4.8	1.8
	3	S	Simple II	23 57	23 58.8	5	13.2	3.6*
28	21	GRF	SimpIIIA GRF	13 25	14 35	135	4.4	2.4**
	2	S/F	Simple IF	14 25	14 26.2	7	5.6	2.5**
	2	S/F	Simple IF	15 24.8	15 25.3	3	6.2	3.1**
	22	GRF	SimpIIIF GRF	22 00	23 00	110	3.2	2.2*

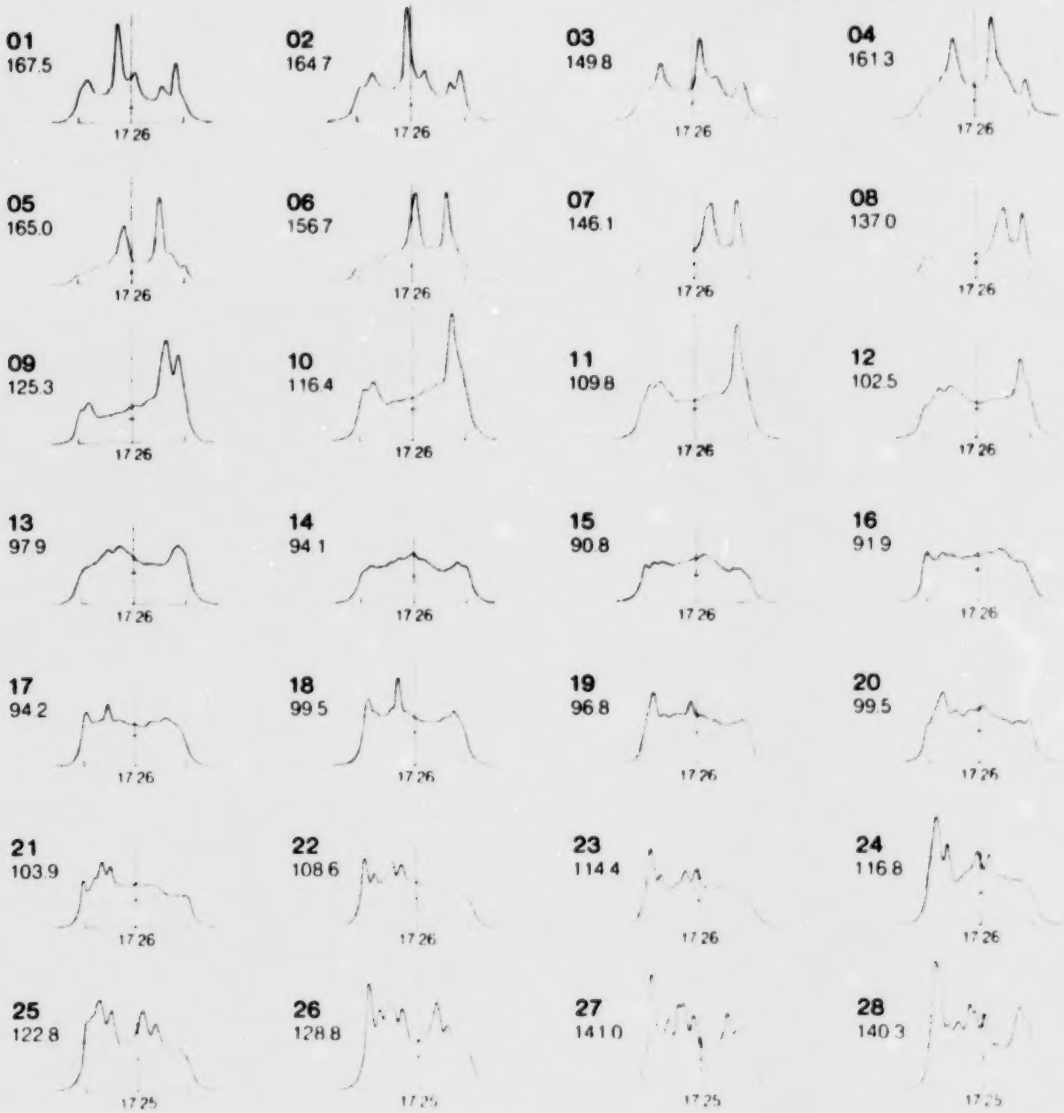
* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

EAST-WEST SOLAR SCANS

FEBRUARY 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



E W

March 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Mar.	Series C	Series C	Series D
1	148.1	145.4	130.9
2	141.1	138.7	124.8
3	143.4	141.0	126.9
4	146.0	143.7	129.3
5	149.0	146.6	131.9
6	141.4	139.3	125.4
7	134.3	132.3	119.1
8	129.9	128.1	115.3
9	123.7	122.0	109.8
10	116.6	115.1	103.6
11	104.4	103.0	92.7
12	100.7#	99.5#	89.5#
13	97.0	95.8	86.2
14	97.0	95.9	86.3
15	101.7#	100.6#	90.5#
16	108.9	107.8	97.0
17	115.7	114.5	103.0
18	118.8	117.7	105.9
19	119.3	118.3	106.5
20	121.7	120.7	108.6
21	119.6#	118.8#	106.9#
22	118.0	117.2	105.5
23	116.9	116.2	104.6
24	117.8	117.1	105.4
25	114.8#	114.2#	102.8#
26	115.2#	114.7#	103.2#
27	110.0	109.6	98.6
28	105.2	104.9	94.4
29	99.2	98.9	89.0
30	100.9	100.7	90.6
31	98.9	98.7	88.8
Mean:	118.6	117.3	105.6

Corrected for burst.

March 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Mar.	14:00	17:00	20:00	19:35
1	148.2	148.1	148.7	145.9
2	138.4	141.1	139.3	140.6
3	142.0	143.4	143.1	143.6
4	147.5	146.0	147.3	146.8#
5	148.4	149.0	145.4	-----
6	140.6	141.4	141.1#	-----
7	135.6	134.3	131.9	132.8
8	129.9	129.9	129.4#	129.9#
9	121.6	123.7	122.3	123.3
10	121.5	116.6	116.4	117.4
11	104.3	104.4	104.0	103.9
12	99.7	100.7#	100.6#	-----
13	98.5	97.0	98.0	-----
14	97.5	97.0	97.9#	96.1#
15	101.9	101.7#	101.4#	101.4#
16	107.2	108.9	109.2	107.5
17	116.9#	115.7	119.1	117.2
18	119.7	118.8	119.1	117.7#
19	116.3	119.3	119.6	-----
20	120.0	121.7	122.9	-----
21	119.4	119.6#	120.2	119.6
22	119.0	118.0	121.0	120.6
23	117.3	116.9	116.3	116.6#
24	116.1	117.8	116.8	116.6
25	114.9	114.8#	114.9	114.4#
26	115.4	115.2#	115.0	-----
27	110.8	110.0	111.2	-----
28	106.1	105.2	103.3	102.5
29	99.1	99.2	99.1	98.6
30	101.7	100.9	100.6	100.5
31	97.6	98.9	98.4	97.5
Mean:	118.5	118.6	118.5	118.0

Corrected for burst.

March 1963

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS		START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Mar.				H M	H M	MINUTES		
1	240	R	Rise Only	13 32	13 43	11	3.0	2.0**
	8	S	Spike	16 18.2	16 18.2	0.1	4.0	---
	20	GRF	SimpIII GRF	19 39	20 02	16	2.6	1.4
	21	GRF	SimpIIIA GRF	20 52	21 13	130	9.0	4.3
	1	S	Simple I	20 54	20 54.7	2	6.4	3.2
	8	S	Spike	21 05	21 05.2	0.3	5.6	---
	8	S	Spike	21 05.9	21 06	0.5	2.6	---
	8	S	Spike	21 12	21 12.3	0.7	8.6	2.8
	3	S	Simple II	23 12.5	23 13	1.5	21.0	9.0*
	29	PBI	P.B. Increase	23 14	23 14	7	4.6	1.8*
	8	S	Spike	23 24.9	23 25.2	0.8	2.0	1.0*
2	27	RF	Rise & Fall	15 47	Indet.	63	2.2	1.9**
	24	R	Rise	15 47	15 51	4	2.2	1.1**
	24P	R	Post Rise	15 51	-- --	49	2.2	---**
	26	FAL	Fall	16 40	16 50	10	-2.2	-1.1**
	20	GRF	SimpIII GRF	20 30	21 10	70	2.4	1.7
3	1	S	Simple I	13 47	13 48.5	8	2.2	1.1**
4	20	GRF	SimpIII GRF	19 05	19 30	45	3.4	1.7
	20	GRF	SimpIII GRF	20 55	21 30	50	2.6	1.4
5	21	GRF	SimpIIIA GRF	14 25	16 00	115	4.6	2.3
	8	S	Spike	15 44.2	15 44.3	0.3	2.8	---
	8	S	Spike	15 57.3	15 57.6	0.7	3.2	1.6
	1	S	Simple I	18 33	18 34.5	6	2.8	1.0
6	20	GRF	SimpIII GRF	19 30	19 55	75	2.0	1.0
8	2	S/F	Simple IF	13 51	13 52.2	3	5.2	---**
	21	GRF	SimpIIIA GRF	15 40	15 55	30	2.8	1.6
	2	S/F	Simple IF	15 43	15 43.8	1	2.6	1.3
	20	GRF	SimpIII GRF	16 45	17 10	60	2.8	1.4
	21	GRF	SimpIIIA GRF	18 25	18 38	35	3.6	1.5
	1	S	Simple I	18 25.5	18 26.1	2.5	2.6	1.4
	21	GRF	SimpIIIA GRF	19 10	19 35	90	2.2	1.1
	8	S	Spike	19 13	19 13.2	0.3	2.2	1.1
	20	GRF	SimpIII GRF	19 54	19 55	12	2.8	1.4
	21	GRF	SimpIIIA GRF	21 10	21 50	155	2.8	2.0
	1	S	Simple I	21 40.5	21 41.2	1.5	2.0	1.0
9	45	C	Complex (-)	00 10.2	00 11.3	7.8	11.6	5.8*

* Only observed at DRAC, Penticton.
**Only observed at ARO, Lake Traverse.

March 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Mar.			H M	H M	MINUTES		
9	└29	PBI P.B. Increase	00 18	00 18	>20	2.8	---*
	20	GRF SimpIII GRF	13 40	13 45	15	1.8	0.9**
	20	GRF SimpIII GRF	14 40	14 50	20	2.0	1.0**
	20	GRF SimpIII GRF	21 00	21 45	90	2.2	1.1
	1	S Simple I	22 54	22 57	8	5.8	2.0*
10	4	S/F Simple IIF	00 06	00 08.8	7	24.0	10.0*
	1	S Simple I	00 14	00 14.1	1	4.2	2.0*
	260	FAL Fall Only	14 30	15 05	35	-2.6	-1.3**
	260	FAL Fall Only	16 25	16 50	25	-2.2	-1.1
11	1	S Simple I	16 35	16 35.7	2	2.2	1.1
12	┌ 21	GRF SimpIIIA GRF	14 15	Indet.	375	4.4	2.2
	├45	C Complex (-)	14 20	14 20.5	4	41.0	20.5**
	└└29	PBI P.B. Increase	14 24	14 24	6	4.2	1.4**
13	20	GRF SimpIII GRF	18 34	18 36.4	12	5.4	2.0
14	┌27	RF Rise & Fall	17 50	Indet.	190	2.0	1.8
	├24	R Rise	17 50	18 06	16	2.0	0.7
	├24P	R Post Rise	18 06	-- --	144	2.0	---
	└26	FAL Fall	20 30	21 00	30	-2.0	-1.0
15	1	S Simple I	12 56	12 57.1	7	7.4	2.4**
	20	GRF SimpIII GRF	16 45	19 20	300	5.6	2.8
16	240	R Rise Only	16 35	16 55	20	1.8	1.0
	1	S Simple I	20 50.2	20 50.5	1.2	5.0	---
	┌21	GRF SimpIIIA GRF	21 30	22 15	>210	7.8	---
	├ 8	S Spike	21 37.5	21 37.5	0.1	3.0	---
	└46F	C Complex F (-)	21 59.7	22 00	5	30.0	10.0
17	3	S Simple II	12 34.3	12 34.5	1	12.6	6.5**
	┌ 21	GRF SimpIIIA GRF	13 32	15 20	200	7.6	4.0
	├46F	C Complex F (-)	13 33.2	13 34	5.8	48.0	17.8**
	└└29	PBI P.B. Increase	13 39	13 39	16	5.6	2.6**
	240	R Rise Only	18 15	19 30	75	3.8	1.9
	┌46F	C Complex F (-)	20 11	20 12.3	7	200.0	59.0
	└29	PBI P.B. Increase	20 18	20 18	130	11.8	5.9
	240	R Rise Only	23 00	23 55	55	4.0	2.2*
18	3	S Simple II	00 49.8	00 51.3	5	22.6	7.6*
	┌21	GRF SimpIIIA GRF	13 30	15 10	165	3.6	1.8**
	├ -	- Incomplete	E14 07	Indet.	>12	5.0	---**

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

March 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS		START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Mar.				H M	H M	MINUTES		
18	⌞ 1	S	Simple I	15 48	15 50	4	1.6	1.2
	⌜21	GRF	SimpIIIA GRF	18 15	19 10	105	4.8	2.2
	⌞ 2	S/F	Simple IF	18 52	18 52.5	1.5	8.8	4.0
19	20	GRF	SimpIII GRF	12 00	13 00	110	4.6	3.2**
	20	GRF	SimpIII GRF	14 20	15 15	90	2.4	1.4**
	⌜240A	R	Rise Only A	16 37	17 00	23	2.0	1.0
	⌞ 8	S	Spike	16 37.8	16 38	0.8	1.6	0.8
20	2	S/F	Simple IF	17 12.8	17 13.5	1	3.4	1.2
21	20	GRF	SimpIII GRF	15 27	15 29	25	5.0	2.0
	32	ABS	Absorption	16 05	17 15	115	-2.6	-1.3
	1	S	Simple I	20 16.5	20 17	1	1.6	0.8
	⌜21	GRF	SimpIIIA GRF	21 05	21 30	45	2.0	1.0
	⌞ 1	S	Simple I	21 22.8	21 24.7	3	4.6	2.0
22	20	GRF	SimpIII GRF	20 00	20 25	120	2.4	1.6
23	1	S	Simple I	18 52	18 52.5	1.5	7.0	1.8
	20	GRF	SimpIII GRF	22 55	23 30	85	2.2	1.1*
24	20	GRF	SimpIII GRF	17 30	17 33	40	2.8	1.0
25	240	R	Rise Only	13 20	13 30	10	2.0	0.8**
	⌜21	GRF	SimpIIIA GRF	14 15	14 45	260	6.8	2.3**
	⌞ 4	S/F	Simple IIF	14 33	14 37	9.5	10.0	3.4**
26	20	GRF	SimpIII GRF	14 45	16 30	195	3.0	1.8
27	20	GRF	SimpIII GRF	18 30	19 05	70	1.6	1.0
28	20	GRF	SimpIII GRF	15 20	15 35	50	2.2	1.1

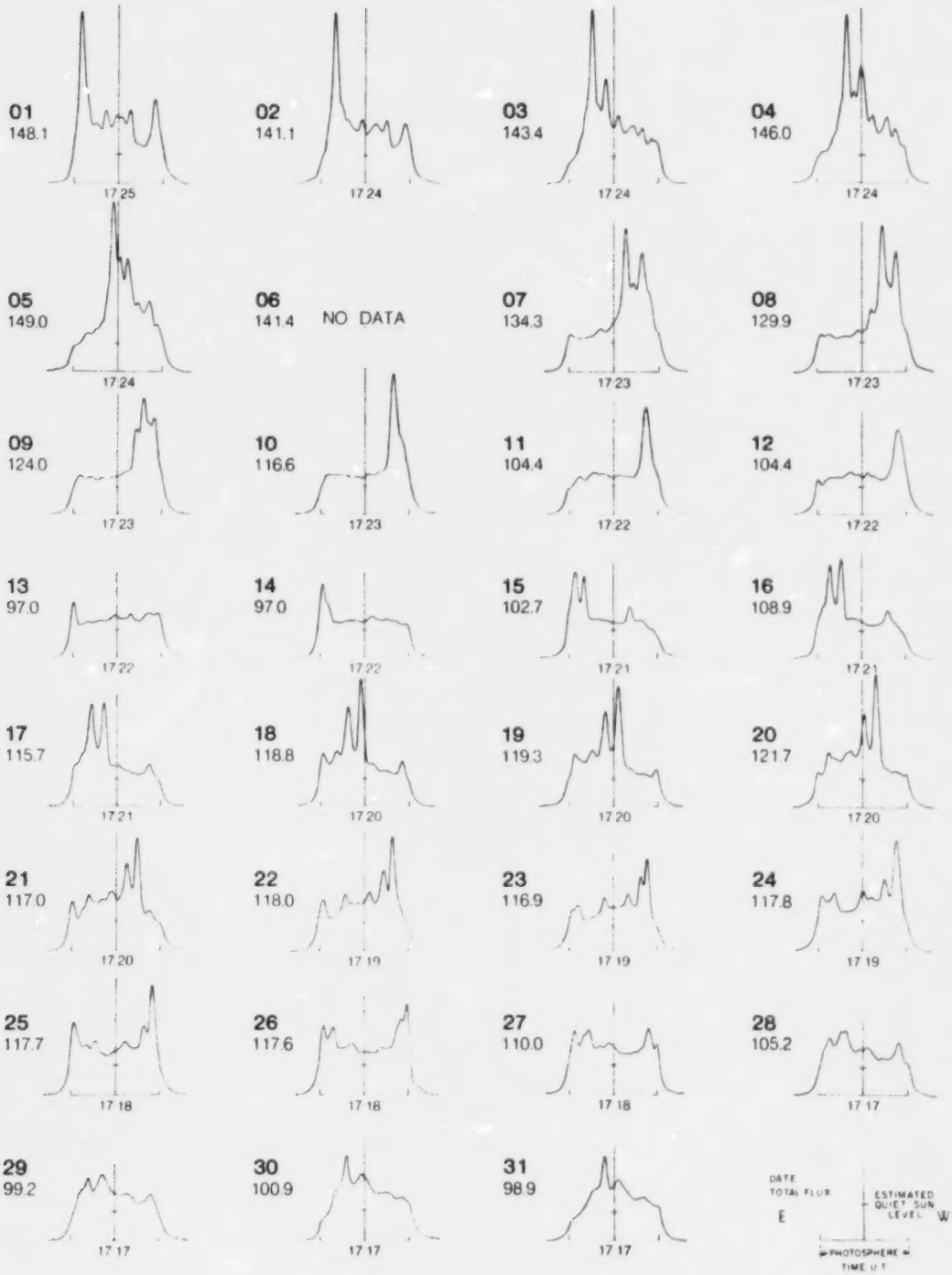
* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

EAST-WEST SOLAR SCANS

MARCH 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



April 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Apr.	Series C	Series C	Series D
1	100.8	100.7	90.6
2	101.3	101.2	91.1
3	101.4#	101.4#	91.3#
4	100.7	100.8	90.7
5	98.6	98.7	88.8
6	99.3	99.5	89.5
7	102.0	102.2	92.0
8	103.8#	104.1#	93.7#
9	105.8	106.1	95.5
10	102.9	103.3	93.0
11	103.9	104.4	94.0
12	107.2	107.7	96.9
13	108.4	109.1	98.2
14	111.0	111.7	100.5
15	102.9	103.6	93.2
16	104.4	105.1	94.6
17	112.6	113.5	102.1
18	119.6	120.7	108.6
19	123.9	125.0	112.5
20	126.1	127.4	114.7
21	132.0	133.3	120.0
22	138.2	139.7	125.7
23	138.9	140.4	126.4
24	141.0	142.7	128.4
25	143.9	145.6	131.0
26	144.9	146.8	132.1
27	147.5	149.6	134.6
28	154.2#	156.4#	140.8#
29	146.2	148.4	133.6
30	145.0	147.2	132.5
Mean:	118.9	119.9	107.9

Corrected for burst.

April 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Apr.	14:00	17:00	20:00	19:35
1	99.7	100.8	102.7	-----
2	100.4	101.3	100.0	-----
3	100.4	101.4#	101.0	-----
4	100.1	100.7	100.1	-----
5	99.1	98.6	98.6	100.0
6	99.0	99.3	100.0	99.2
7	101.5	102.0	102.1	101.5
8	103.6	103.8#	103.8	103.8
9	104.8	105.8	104.4	-----
10	103.3	102.9	103.8	-----
11	103.0	103.9	105.2	103.4
12	107.9	107.2	107.7	108.0
13	108.0	108.4	107.5	106.7
14	112.4	111.0	109.5	108.3
15	102.7	102.9	103.1	102.9
16	103.9	104.4	104.4	-----
17	110.6	112.6	115.5	-----
18	119.8#	119.6	123.8	123.3
19	125.9	123.9	124.5	124.4
20	125.0	126.1	126.5#	126.4#
21	133.2	132.0	133.5	132.4
22	137.3	138.2	139.1	139.3
23	142.0	138.9	139.3	-----
24	139.5	141.0	139.7	-----
25	144.6	143.9	149.2	148.7
26	144.6	144.9	145.4	144.3
27	145.2	147.5	147.9	146.0
28	154.3#	154.2#	154.0	152.5#
29	146.6	146.2	146.6	145.9
30	142.3	145.0	145.2	-----
Mean:	118.7	118.9	119.5	121.9

Corrected for burst.

April 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS		START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Apr.				H M	H M	MINUTES		
1	8	S	Spike	16 08	18 08.3	0.5	2.0	1.0
	21	GRF	SimpIIIA GRF	22 20	23 00	115	1.6	0.8*
	1	S	Simple I	22 50.9	22 51.3	1.2	1.0	0.5*
2	1	S	Simple I	19 42	19 42.8	2	1.6	0.8
3	21	GRF	SimpIIIA GRF	16 50	17 10	120	8.4	4.0
	8	S	Spike	16 58.9	16 58.9	0.1	1.8	---
4	3	S	Simple II	13 26.2	13 26.7	2	17.4	5.0**
	4	S/F	Simple IIF	16 42	16 43.2	5	130.0	17.4
	21	GRF	SimpIIIA GRF	20 00	20 30	70	1.8	0.9
	1	S	Simple I	20 02.5	20 03	1.5	3.6	1.8*
5	21	GRF	SimpIIIA GRF	17 25	17 50	65	3.2	1.8
	1	S	Simple I	17 27.5	17 28.7	3	3.8	1.8
	2	S/F	Simple IF	23 38	23 40.5	7	3.6	1.6*
8	27	RF	Rise & Fall	15 30	Indet.	205	2.0	1.7
	24	R	Rise	15 30	15 55	25	2.0	1.5
	24P	R	Post Rise	15 55	-- --	145	2.0	---
	26	FAL	Fall	18 20	18 55	35	-2.0	-1.5
9	22	GRF	SimpIIIF GRF	15 08	15 12	17	2.0	1.0
	1	S	Simple I	17 43	17 45	9	1.6	0.8
	20	GRF	SimpIII GRF	22 15	22 50	115	1.8	1.0*
10	20	GRF	SimpIII GRF	15 10	15 20	20	1.6	0.8
	1	S	Simple I	20 05	20 10	10	1.2	0.6*
	21	GRF	SimpIIIA GRF	22 20	22 30	80	2.0	1.0
	1	S	Simple I	22 22	22 22.8	4	3.8	1.6
11	20	GRF	SimpIII GRF	18 50	19 00	50	2.0	1.0
12	22	GRF	SimpIIIF GRF	14 02	14 05	40	2.4	1.2**
13	27	RF	Rise & Fall	12 10	Indet.	375	1.2	1.1
	24	R	Rise	12 10	12 25	15	1.2	0.6**
	24P	R	Post Rise	12 25	-- --	335	1.2	---
	26	FAL	Fall	18 00	18 25	25	-1.2	-0.8
14	20	GRF	SimpIII GRF	12 30	12 38	35	2.0	1.0**
	20	GRF	SimpIII GRF	20 20	20 30	40	1.6	1.0
	240	R	Rise Only	21 05	21 15	10	1.6	0.8
17	20	GRF	SimpIII GRF	22 25	00 15	165	3.6	1.8*
18	4	S/F	Simple IIF	01 21	01 30.8	>30	41.0	---*
	20	GRF	SimpIII GRF	13 15	13 45	105	2.0	1.0**

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

April 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Apr.			H M	H M	MINUTES		
18	240A	R	Rise Only A	18 35	19 35	60	3.0	---
	21	GRF	SimpIIIA GRF	19 16	19 24	16	2.0	1.0
	2	S/F	Simple IF	19 16	19 17	2	2.0	1.0
	27A	RF	Rise & Fall A	21 30	Indet.	200	3.0	2.6
	24	R	Rise	21 30	21 47	17	3.0	1.2
	24P	R	Post Rise	21 47	-- --	143	3.0	---
	2	S/F	Simple IF	21 48.5	21 51.5	4.5	4.4	2.0
	29	PBI	P.B. Increase	21 53	21 53	9	2.0	1.4
	26	FAL	Fall	00 10	00 50	40	-3.0	-1.5*
19	20	GRF	SimpIII GRF	12 30	13 00	75	2.0	1.3**
	26O	FAL	Fall Only	14 25	15 00	35	-2.0	-1.0**
	20	GRF	SimpIII GRF	15 05	16 05	95	2.4	1.2
	1	S	Simple I	20 20	20 21.2	2.2	1.4	0.6
20	1	S	Simple I	00 10.9	00 11	1	3.4	1.1*
	1	S	Simple I	00 33	00 34.3	2.5	1.8	0.8*
	22	GRF	SimpIIIF GRF	11 40	12 35	90	2.6	1.3**
	1	S	Simple I	14 11.8	14 12	10	9.0	3.0*
	20	GRF	SimpIII GRF	15 45	15 50	25	2.4	1.7
	21	GRF	SimpIIIA GRF	17 20	20 30	250	4.6	2.4**
	3	S	Simple II	17 24	17 28	7	10.6	6.4**
	29	PBI	P.B. Increase	17 31	17 31	35	4.8	1.8**
	1	S	Simple I	19 00	19 00.5	2	2.2	1.0
	1	S	Simple I	20 56	20 57	3	1.8	0.9
21	1	S	Simple I	16 15	16 15.8	2	2.2	1.1
	22	GRF	SimpIIIF GRF	16 30	16 36	20	5.2	2.4
	1	S	Simple I	18 44	18 45	5	2.0	0.9
	2	S/F	Simple IF	20 55.5	20 56.2	3	4.4	2.2
	21	GRF	SimpIIIA GRF	22 23	22 25	35	2.0	1.2
	1	S	Simple I	22 23.7	22 24	1.5	3.2	1.4
22	1	S	Simple I	00 00	00 00.5	1.5	8.8	4.0*
	3	S	Simple II	00 03.5	00 04.6	12.5	84.0	16.8*
	29	PBI	P.B. Increase	00 16	00 16	35	3.4	1.7*
	1	S	Simple I	01 04	01 04.2	1	2.6	1.3*
	3	S	Simple II	11 48	11 48.4	1	12.6	4.2**
	4	S/F	Simple IIF	15 59	15 59.6	2	10.0	3.4
	2	S/F	Simple IF	18 36	18 37.3	7	5.0	1.8

* Only observed at DRAC, Penticton.
**Only observed at ARO, Lake Traverse.

April 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Apr.				H M	H M	MINUTES		
22	1	S	Simple I	19 52	19 52.3	1	1.4	0.6
	20	GRF	SimpIII GRF	22 30	23 15	120	3.4	---*
23	20	GRF	SimpIII GRF	13 18	13 35	40	2.6	1.5**
	260	FAL	Fall Only	14 30	15 10	40	-2.8	---**
	2	S/F	Simple IF	15 56	15 56.5	1	1.8	---
	21	GRF	SimpIIIA GRF	17 35	18 10	50	2.2	1.1
	40	F	Fluctuations	17 50.8	17 50.8	0.6	10.6	---
24	22	GRF	SimpIIIF GRF	01 23.5	01 25	12	8.8	---*
	20	GRF	SimpIII GRF	15 03	15 08	17	2.6	1.0
	20	GRF	SimpIII GRF	18 05	18 10	20	2.0	1.0
	1	S	Simple I	19 11.5	19 16	3	2.4	0.8
25	2	S/F	Simple IF	13 12.8	13 13	1	2.0	---**
	2	S/F	Simple IF	15 32	15 32.3	1	6.8	---
	23	GRF	SimpIIIAF GRF	15 35	16 15	75	5.2	2.0
	1	S	Simple I	15 48	15 50	7	2.8	1.0
	240	R	Rise Only	18 20	18 40	20	2.8	1.9
	240	R	Rise Only	19 25	19 40	15	2.6	1.1**
	21	GRF	SimpIIIA GRF	21 38	21 52	30	2.8	1.4
	1	S	Simple I	21 39	21 42.5	6	3.8	1.8
26	1	S	Simple I	11 40	11 42	4	2.0	1.0**
	20	GRF	SimpIII GRF	17 55	18 10	50	2.4	1.2
	3	S	Simple II	23 36	23 37.7	4	82.0	20.4*
27	8	S	Spike	00 14	00 14.1	0.5	8.2	3.0*
	4	S/F	Simple IIF	13 49	13 49.5	2	10.4	4.0**
	46F	C	Complex F (-)	13 54	13 56	6	45.0	20.8**
	31	ABS	P.B. Decrease	14 00	14 35	70	-3.2	-1.6
	20	GRF	SimpIII GRF	17 05	17 20	40	2.8	1.4
	20	GRF	SimpIII GRF	17 48	18 10	70	2.8	1.4
	20	GRF	SimpIII GRF	21 05	21 25	40	2.8	1.4
	20	GRF	SimpIII GRF	22 05	23 50	>230	11.0	---*
28	21	GRF	SimpIIIA GRF	E11 20	12 55	>520	27.6	---**
	1	S	Simple I	11 39	11 40.5	4	5.6	1.9**
	20	GRF	SimpIII GRF	15 40	15 45	40	5.6	2.8
	22	GRF	SimpIIIF GRF	18 30	18 40	55	8.4	3.0
	22	GRF	SimpIIIF GRF	21 15	21 18	15	2.2	1.0
	21	GRF	SimpIIIA GRF	22 00	22 20	160	4.8	2.0

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

April 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

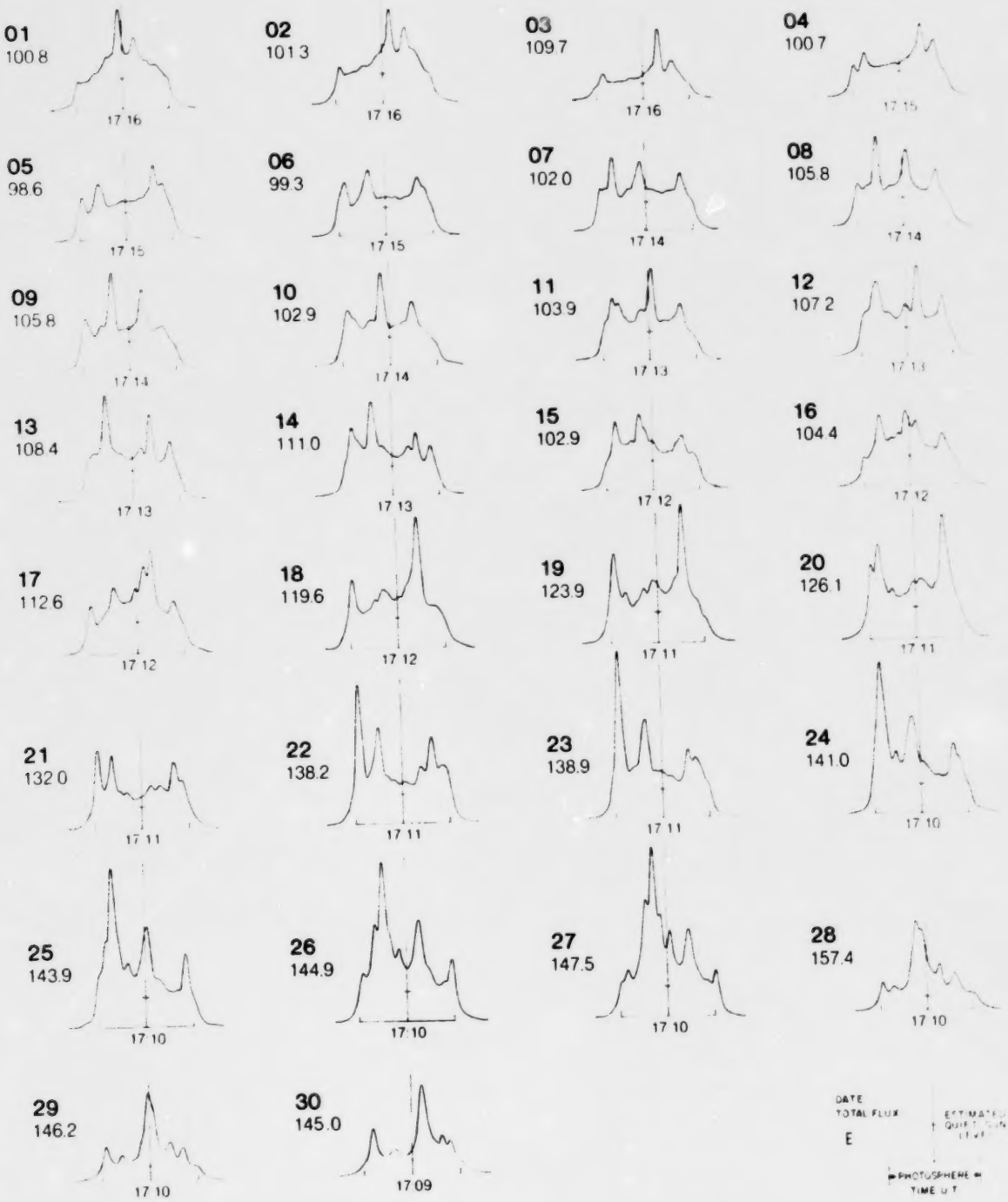
DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Apr.				H M	H M	MINUTES		
28	40	F	Fluctuations	22 07	22 07	1.8	9.4	---
29	20	GRF	SimpIII GRF	14 28	14 30	20	2.2	1.0
	20	GRF	SimpIII GRF	18 00	18 30	70	2.2	1.1
	20	GRF	SimpIII GRF	20 15	20 18	40	2.8	1.4
30	20	GRF	SimpIII GRF	19 40	19 45	40	2.4	1.2

EAST-WEST SOLAR SCANS

APRIL 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



May 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
May.	Series C	Series C	Series D
1	139.8	142.0	127.8
2	143.1	145.4	130.9
3	137.1	139.4	125.5
4	130.7	132.9	119.6
5	128.5	130.8	117.7
6	123.6#	125.8#	113.2#
7	115.2	117.4	105.7
8	124.6	127.0	114.3
9	129.7#	132.2#	119.0#
10	140.7#	143.5#	129.1#
11	156.2#	159.3#	143.4#
12	157.1#	160.4#	144.4#
13	151.2	154.4	139.0
14	150.2#	153.5#	138.1#
15	142.6	145.7	131.1
16	131.0#	134.0#	120.6#
17	128.7#	131.7#	118.5#
18	134.4	137.6	123.8
19	143.4	146.8	132.1
20	148.2#	151.8#	136.6#
21	146.1	149.8	134.8
22	148.3	152.0	136.8
23	140.1	143.7	129.3
24	136.9	140.5	126.4
25	135.3	138.8	124.9
26	128.8	132.3	119.1
27	127.1	130.5	117.4
28	129.6	133.1	119.8
29	135.2	139.0	125.1
30	131.7#	135.4#	121.9#
31	134.2#	138.0#	124.2#
Mean:	137.1	140.2	126.1

Corrected for burst.

May 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
May.	14:00	17:00	20:00	19:35
1	143.5	139.8	140.7#	-----
2	144.3	143.1	151.2	147.6
3	140.6#	137.1	136.0	135.4
4	130.3	130.7	132.9	132.3
5	127.8#	128.5	133.5	133.5
6	123.0#	123.6#	123.1	123.1
7	119.4	115.2	117.5	-----
8	127.4	124.6	124.8#	-----
9	128.1	129.7#	132.8	130.7
10	139.0#	140.7#	142.2#	141.7#
11	157.4#	156.2#	156.7#	156.4#
12	157.0#	157.1#	157.3	157.2
13	152.8	151.2	152.3#	151.4
14	151.5	150.2#	148.2	-----
15	146.1#	142.6	141.2	-----
16	132.4	131.0#	131.1#	129.1#
17	128.2	128.7#	127.5#	127.2
18	131.1	134.4	136.0#	134.1#
19	138.0#	143.4	143.3	142.1
20	145.3	148.2#	150.2	149.0
21	147.7#	146.1	146.0#	-----
22	152.5	148.3	145.8	-----
23	141.7	140.1	140.0#	-----
24	137.1	136.9	136.0	136.6
25	133.8	135.3	135.7	136.2
26	128.9	128.8	128.4	128.2
27	125.4	127.1	129.1	128.8
28	128.9	129.6	129.7	-----
29	134.9	135.2	134.2	-----
30	130.4	131.7#	132.9	131.9
31	133.6#	134.2#	134.0#	132.6#
Mean:	137.4	137.1	137.8	137.4

Corrected for burst.

May 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
May.				H M	H M	MINUTES		
1	20	GRF	SimpIII GRF	11 49	11 50	30	3.6	1.8**
	20	GRF	SimpIII GRF	13 10	13 25	45	4.0	2.0**
	20	GPF	SimpIII GRF	15 45	15 47	11	3.8	1.3
	1	S	Simple I	17 14.8	17 15	1	2.6	1.4
	260	FAL	Fall Only	15 56	16 03	7	-3.0	-1.5
	r 23	GRF	SimpIIIAF GRF	18 35	23 35	>420	30.0	---
	|r23	GRF	SimpIIIAF GRF	18 36	18 46	105	8.2	4.1
	|L 4	S/F	Simple IIF	18 36	18 39.8	5	10.2	4.0
	|r21	GRF	SimpIIIA GRF	20 41	21 00	75	13.8	8.0
	|L 4	S/F	Simple IIF	20 44.5	20 49.7	10	13.6	6.8
	|r 4	S/F	Simple IIF	22 52	22 58	13	27.0	14.6*
	LL29	PBI	P.B. Increase	23 05	23 05	25	8.2	4.1*
2	8	S	Spike	15 55.6	15 55.6	0.1	3.8	---
	8	S	Spike	15 58	15 58	0.5	3.8	---
	r27A	PF	Rise & Fall A	17 05	Indet.	395	6.0	4.5
	|24	R	Rise	17 05	18 40	95	6.0	2.0
	| 3	S	Simple II	18 29.5	18 31.5	5	15.2	5.1
	|24P	R	Post Rise	18 40	-- --	230	6.0	---
	L26	FAL	Fall	22 30	23 40	70	-6.0	-3.0*
3	240	R	Rise Only	00 07	00 10	3	2.8	1.4*
	1	S	Simple I	01 13.5	01 13.9	1	1.6	0.8*
	20	GRF	SimpIII GRF	10 0	12 0	50	4.2	2.0**
	20	GRF	SimpIII GRF	12 20	12 35	130	3.0	1.5**
	r26A	FAL	Fall A	15 20	16 50	90	-3.0	-1.5
	L20	GRF	SimpIII GRF	16 00	16 15	40	2.2	1.1
	r21	GPF	SimpIIIA GRF	20 40	21 45	220	7.2	2.4
	L 3	S	Simple II	21 38	21 39.5	8	22.4	7.4
4	1	S	Simple I	11 19	11 20	10	3.0	1.2**
	22	GRF	SimpIIIF GRF	18 24	18 40	40	3.0	1.3
5	20	GRF	SimpIII GRF	00 05	00 20	75	7.2	3.2*
	20	GRF	SimpIII GRF	11 35	12 05	100	3.0	2.1**
	r 1	S	Simple I	13 58	13 59.5	2.2	8.6	4.2
	L29	PBI	P.B. Increase	14 00.2	14 00.2	12	4.4	---
	20	GRF	SimpIII GRF	14 20	14 30	30	3.0	1.8
	240	R	Rise Only	17 40	18 00	20	2.0	1.0
	r 240A	R	Rise Only A	18 50	19 25	35	3.0	---

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

May 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
May.			H M	H M	MINUTES		
5	⌈21	GRF SimpIIIA GRF	19 00	19 12	25	5.0	3.0
	⌊ 1	S Simple I	19 00.5	19 01	1	3.0	1.3
	240	R Rise Only	21 10	21 40	30	2.2	1.0
	20	GRF SimpIII GRF	23 30	23 55	50	2.2	1.1*
6	20	GRF SimpIII GRF	00 40	01 00	60	2.2	1.4*
	260	FAL Fall Only	11 40	12 05	25	-3.0	-1.5**
	22	GRF SimpIIIF GRF	12 40	15 30	390	8.0	4.0
7	⌈21	GRF SimpIIIA GRF	01 30	01 37	14	7.2	4.0*
	⌊40	F Fluctuations	01 34	01 34.5	2	42.0	---*
	⌈21	GRF SimpIIIA GRF	11 55	12 07	30	3.0	1.6**
	⌊ 1	S Simple I	12 00.3	12 01	1.5	3.4	1.5**
	20	GRF SimpIII GRF	13 05	13 15	50	2.4	1.2**
	260	FAL Fall Only	14 20	14 45	25	-3.0	-1.5
	1	S Simple I	15 37	15 38	2	3.8	1.8
	⌈240A	R Rise Only A	19 26	19 29	3	2.8	1.4
	⌊ 3	S Simple II	19 26.2	19 27	2	11.0	4.0
	⌈47	GB Grt Burst (-)	22 16.5	22 19.5	8.5	640.0	157.0
	⌈30	PBI P.B. Incr. A	22 25	22 25	20	21.0	10.5
	⌈ 8	S Spike	22 27.7	22 27.8	0.3	6.4	3.2
	⌊ 1	S Simple I	22 33	22 35	3	4.2	2.8
	8	S Spike	23 33.9	23 33.9	0.1	6.6	---*
8	20	GRF SimpIII GRF	17 30	18 35	195	3.0	1.5
	240	R Rise Only	22 20	23 15	55	3.6	---*
	⌈21	GRF SimpIIIA GRF	23 45	23 55	65	3.6	1.4*
	⌊ 1	S Simple I	23 51	23 51.3	1.5	1.8	0.9*
9	2	S/F Simple IF	12 02.5	12 02.8	3	6.0	2.6**
	20	GRF SimpIII GRF	13 00	13 08	30	3.6	1.6**
	240	R Rise Only	14 03	14 07	4	1.6	0.8*
	⌈ 3	S Simple II	14 11.5	14 12.2	3.5	42.0	14.0*
	⌊29	PBI P.B. Increase	14 15	14 15	75	5.2	2.6
	⌈21	GRF SimpIIIA GRF	15 45	17 00	195	4.6	3.0
	⌈40	F Fluctuations	17 32.5	17 37.5	10	2.2	---
	⌊ 1	S Simple I	17 49	17 51.2	8	5.2	1.8
	1	S Simple I	20 20.8	20 21.4	2	4.0	2.0
	20	GRF SimpIII GRF	21 05	21 10	40	4.0	1.8
	⌈46F	C Complex F (-)	23 04	23 07.2	14	320.0	98.0*

* Only observed at DRAO, Penticton.
**Only observed at APO, Lake Traverse.

May 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS		START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
May.				H M	H M	MINUTES		
9	+29	PBI	P.B. Increase	23 18	23 18	22	9.8	3.2*
	└31	ABS	P.B. Decrease	23 40	23 55	40	-2.6	-1.5*
10	┌ 4	S/F	Simple IIF	12 07	12 12.7	11	145.0	66.6**
	+30	PBI	P.B. Incr. A	12 18	12 18	335	8.6	4.0
	| 20	GRF	SimpIII GRF	14 50	15 25	80	4.6	2.8
	└20	GRF	SimpIII GRF	16 20	16 50	80	5.2	2.8
	20	GRF	SimpIII GRF	18 15	18 45	165	10.4	3.6
	20	GRF	SimpIII GRF	21 10	21 35	40	1.8	1.0
	20	GRF	SimpIII GRF	22 00	22 15	30	2.4	1.2
	240	R	Rise Only	23 25	23 40	15	3.4	1.7*
	┌240A	R	Rise Only A	00 03	00 41	38	5.8	2.8*
	└ 4	S/F	Simple IIF	00 04	00 05.5	6	13.6	4.6*
11	┌ 23	GRF	SimpIIIAF GRF	10 50	15 00	660	18.8	---**
	| 1	S	Simple I	11 57	11 57.3	5	3.8	1.8**
	| 1	S	Simple I	12 03.5	12 04	1	3.2	1.5**
	| 2	S/F	Simple IF	14 18.5	14 21	8	9.2	4.4**
	|┌28	PRE	Precursor	14 30	14 44.8	17.2	20.0	---**
	|└45	C	Complex (-)	14 47.2	14 49	8.5	144.0	38.6**
	| 1	S	Simple I	15 12.5	15 14	3	2.8	1.3**
	| 4	S/F	Simple IIF	16 12.8	16 13.7	5	27.0	6.8
	| 1	S	Simple I	19 30.2	19 30.8	1.5	6.6	3.3
	| 1	S	Simple I	19 32.3	19 32.5	1	7.8	2.6
	| 3	S	Simple II	19 40.2	19 41.5	8	13.8	3.6**
	└ 1	S	Simple I	20 06	20 06.7	2	2.4	1.2*
	┌240A	R	Rise Only A	22 05	22 20	15	3.8	1.9
	└ 1	S	Simple I	22 07.8	22 08	1.2	2.4	1.2
	3	S	Simple II	23 37.2	23 38.5	3	12.0	6.0*
	┌21	GRF	SimpIIIA GRF	23 48	Indet.	80	4.6	---*
	| 4	S/F	Simple IIF	23 51	23 51.8	4	12.6	6.3*
	└ 1	S	Simple I	00 21.5	00 21.8	1	3.2	1.6*
12	20	GRF	SimpIII GRF	11 05	11 10	35	5.8	2.7**
	┌23	GRF	SimpIIIAF GRF	11 50	14 05	230	15.6	6.0**
	| 8	S	Spike	12 31.6	12 31.8	0.4	4.6	2.3**
	|45	C	Complex (-)	12 37	12 42	7	8.0	4.0**
	| 1	S	Simple I	14 16	14 16.5	1.5	2.4	1.2*
	└ 1	S	Simple I	14 18.5	14 18.6	2.5	5.0	2.7

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

May 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
May.			H M	H M	MINUTES		
12	┌21	GRF SimpIIIA GRF	16 05	16 25	85	3.4	1.9
	| 2	S/F Simple IF	16 19.9	16 20	1	3.2	1.6
	└ 3	S Simple II	16 37	16 38	7	27.0	5.4
	32	ABS Absorption	18 00	18 20	50	-3.2	-2.2
	20	GRF SimpIII GRF	20 32	20 35	25	3.2	1.6
	260	FAL Fall Only	21 00	21 30	30	-6.2	-3.1
	22	GRF SimpIIIF GRF	21 35	22 25	85	6.2	2.0
13	8	S Spike	00 36.2	00 36.5	0.8	1.6	0.9*
	┌21	GRF SimpIIIA GRF	11 05	11 10	17	2.2	1.1**
	└ 8	S Spike	11 10.7	11 10.8	0.7	2.2	1.1**
	1	S Simple I	11 34	11 35	2.5	2.6	1.3**
	┌27A	RF Rise & Fall A	12 10	Indet.	350	3.2	3.0**
	|24	R Rise	12 10	12 25	15	3.2	1.6**
	|24P	P Post Rise	12 25	-- --	305	3.2	---**
	|20	GRF SimpIII GRF	12 30	12 32	25	3.2	1.7**
	|20	GRF SimpIII GRF	14 15	14 40	60	5.0	2.5
	└26	FAL Fall	17 30	18 00	30	-3.2	-1.6
	240	R Rise Only	19 05	19 20	15	2.2	1.1
	┌21	GRF SimpIIIA GRF	19 25	19 50	195	5.8	2.5
	└ 1	S Simple I	19 46	19 46.5	2	2.2	1.1
	20	GRF SimpIII GRF	23 50	00 10	55	3.0	1.5*
14	1	S Simple I	11 43	11 43.3	1	3.2	1.8**
	32	ABS Absorption	11 55	12 30	70	-2.6	-1.3**
	┌21	GRF SimpIIIA GRF	15 25	16 15	155	6.2	3.1
	└ 2	S/F Simple IF	16 05	16 09	6	4.0	2.2
	┌21	GRF SimpIIIA GRF	19 15	19 23	45	2.6	1.3
	└ 1	S Simple I	19 43	19 43.5	1.5	3.8	1.9
	┌23	GRF SimpIIIAF GRF	21 40	22 10	160	4.2	1.9
	└ 1	S Simple I	23 13.2	23 14	2	3.6	1.5*
15	260	FAL Fall Only	E10 55	14 47	>227	-41.0	---**
	260	FAL Fall Only	16 35	16 55	20	-3.2	-1.6
16	1	S Simple I	00 42.8	00 43.5	2	7.6	2.6*
	8	S Spike	11 33.4	11 33.7	0.5	2.8	---**
	┌21	GRF SimpIIIA GRF	11 35	12 40	90	3.4	1.9**
	| 1	S Simple I	11 37	11 37.4	1	2.8	1.0**
	└45	C Complex (-)	11 40	11 43.5	5	5.0	2.3**

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

May 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
May.				H M	H M	MINUTES		
16	1	S	Simple I	14 38	14 38.1	1	4.2	2.1
	21	GRF	SimpIIIA GRF	15 30	17 35	340	15.6	7.0
	1	S	Simple I	15 38	15 39	3	2.8	1.3
	3	S	Simple II	16 31.2	16 33	4	16.6	5.4
	1	S	Simple I	16 52	16 53	2	9.0	3.0
	20	GRF	SimpIII GRF	21 40	21 55	30	2.0	0.8
17	21	GRF	SimpIIIA GRF	15 20	16 10	85	3.0	1.7**
	1	S	Simple I	16 36	16 36.3	1	3.4	1.1**
	20	GRF	SimpIII GRF	16 50	17 30	60	2.2	1.1
	20	GRF	SimpIII GRF	17 55	18 30	90	4.4	3.0
	22	GRF	SimpIIIF GRF	19 45	20 15	115	4.2	2.6
	240	R	Rise Only	21 55	22 15	20	2.4	1.2
	20	GRF	SimpIII GRF	22 30	23 00	55	2.4	1.4*
18	1	S	Simple I	13 22.7	13 22.9	6	9.0	---**
	20	GRF	SimpIII GRF	14 40	15 40	125	2.8	2.0
	21	GRF	SimpIIIA GRF	17 30	18 50	215	5.6	2.6
	1	S	Simple I	18 08	18 09.5	3	3.8	1.2
19	20	GRF	SimpIII GRF	12 35	13 20	115	2.8	2.0**
	240	R	Rise Only	15 33	15 48	15	5.4	2.5
	240	R	Rise Only	22 05	23 15	70	7.4	4.0
	8	S	Spike	23 27	23 27	0.2	5.0	---*
20	21	GRF	SimpIIIA GRF	00 10	01 40	>90	16.2	---*
	22	GRF	SimpIIIF GRF	00 23.3	00 29.8	15	14.4	7.0*
	240	R	Rise Only	15 40	15 50	10	3.0	1.5
	20	GRF	SimpIII GRF	16 00	16 10	80	3.0	1.5
	240	R	Rise Only	17 48	17 50	2	2.4	1.2
	20	GRF	SimpIII GRF	18 50	18 53	20	2.0	1.0
	21	GRF	SimpIIIA GRF	20 30	Indet.	>300	14.8	---
	20	GRF	SimpIII GRF	20 47	20 58	135	12.4	6.2
	20	GRF	SimpIII GRF	23 15	23 30	35	4.6	3.0*
21	20	GRF	SimpIII GRF	11 00	11 15	40	3.2	1.6**
	20	GRF	SimpIII GRF	12 33	12 35	15	2.0	1.0**
	21	GRF	SimpIIIA GRF	13 37	13 45	35	3.2	1.6**
	2	S/F	Simple IF	13 40	13 42	9	6.6	3.2**
	22	GRF	SimpIIIF GRF	17 20	17 28	30	3.2	1.5
	22	GRF	SimpIIIF GRF	19 10	19 15	20	2.0	1.0

* Only observed at DRAC, Penticton.
**Only observed at ARO, Lake Traverse.

May 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
May.				H M	H M	MINUTES		
21	22	GRF	SimpIIIF GRF	19 45	19 58	25	3.8	1.4
	1	S	Simple I	20 31	20 32	5	2.6	1.4
	21	GRF	SimpIIIA GRF	21 25	22 00	140	4.8	2.2
	20	GRF	SimpIII GRF	21 27	21 29.5	13	6.0	2.0
22	20	GRF	SimpIII GRF	11 15	12 35	120	5.8	3.2**
	1	S	Simple I	13 55.7	13 56	1.5	6.4	3.1**
	22	GRF	SimpIIIF GRF	14 45	15 00	30	3.2	2.1
	20	GRF	SimpIII GRF	15 40	15 42	25	2.2	1.1
	260	FAL	Fall Only	16 20	17 00	40	-3.2	-1.6
	20	GRF	SimpIII GRF	18 50	21 10	245	4.2	2.1
23	27A	RF	Rise & Fall A	12 30	Indet.	85	3.0	2.4**
	24	R	Rise	12 30	12 55	25	3.0	1.5**
	24P	R	Post Rise	12 55	-- --	50	3.0	---**
	1	S	Simple I	13 22	13 23	3	2.8	1.3**
	26	FAL	Fall	13 45	13 55	10	-3.0	-1.5**
	21	GRF	SimpIIIA GRF	17 10	18 45	220	4.0	2.2
	3	S	Simple II	18 16	18 16.9	4	12.0	4.0
24	20	GRF	SimpIII GRF	00 05	00 20	40	2.4	1.8*
	20	GRF	SimpIII GRF	15 17	15 20	20	2.2	1.0
	2	S/F	Simple IF	16 01.6	16 02	3	8.8	4.4
	20	GRF	SimpIII GRF	19 07	19 20	45	2.4	1.2
	1	S	Simple I	20 47	20 47.2	3	2.2	1.0
25	20	GRF	SimpIII GRF	00 40	00 45	35	2.0	1.0*
	20	GRF	SimpIII GRF	11 20	12 05	115	3.8	1.6**
	21	GRF	SimpIIIA GRF	14 50	14 55	85	3.2	1.6
	1	S	Simple I	14 53	14 54	2	2.2	1.4
	20	GRF	SimpIII GRF	18 15	18 22	35	2.0	1.0
	22	GRF	SimpIIIF GRF	19 03	19 12	37	3.0	1.2
	3	S	Simple II	23 24	23 25.8	6	22.0	8.4*
	20	GRF	SimpIII GRF	23 47	23 49	105	3.2	1.6*
26	20	GRF	SimpIII GRF	12 40	13 10	55	2.0	1.0**
	20	GRF	SimpIII GRF	20 10	20 25	50	2.6	1.8
27	240	R	Rise Only	16 50	16 57	7	1.4	0.7
	240	R	Rise Only	17 45	17 55	10	2.0	1.0
	240	R	Rise Only	21 50	22 45	55	2.4	0.8*
	20	GRF	SimpIII GRF	23 50	Indet.	>115	7.4	---*

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

May 1983

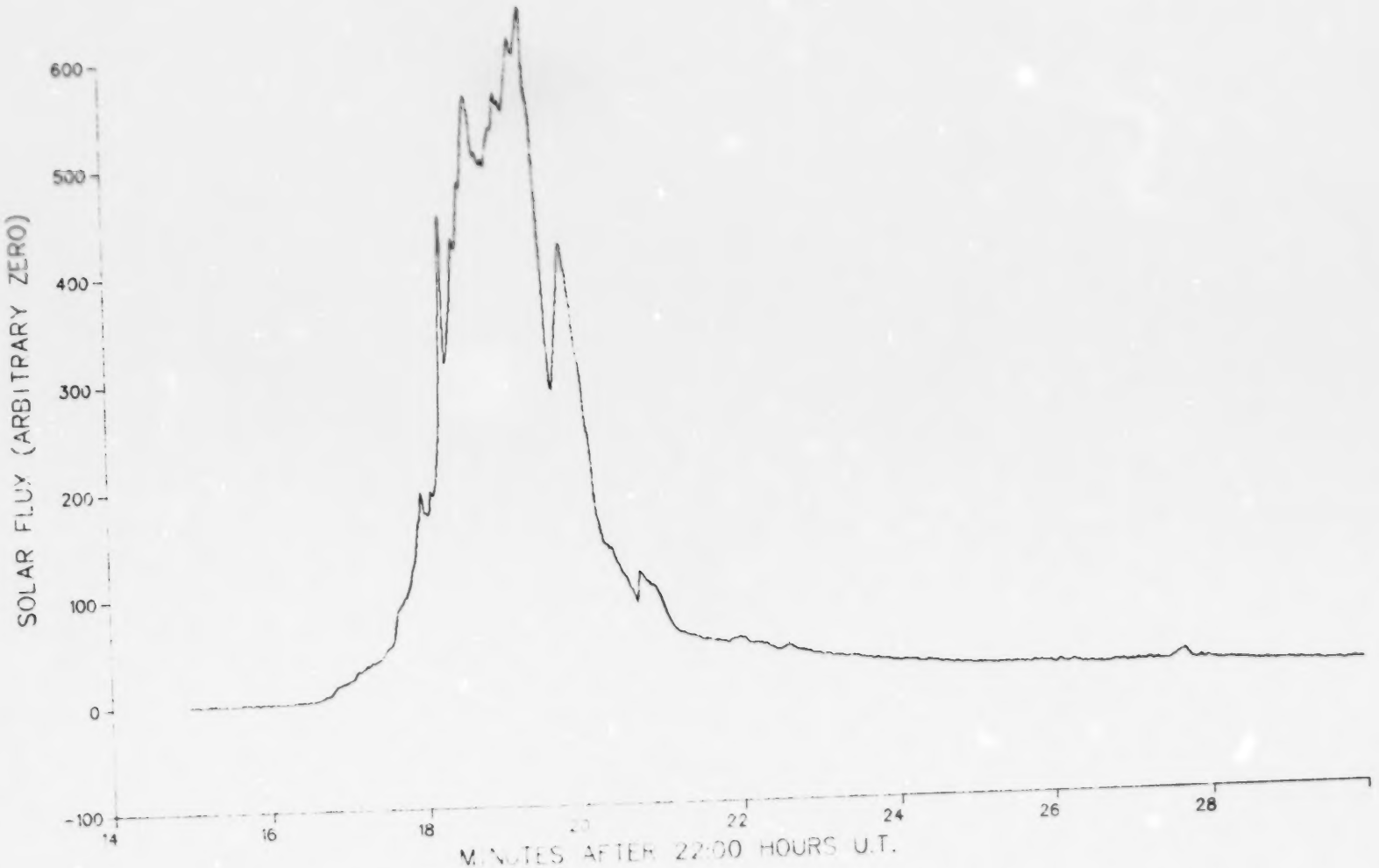
OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

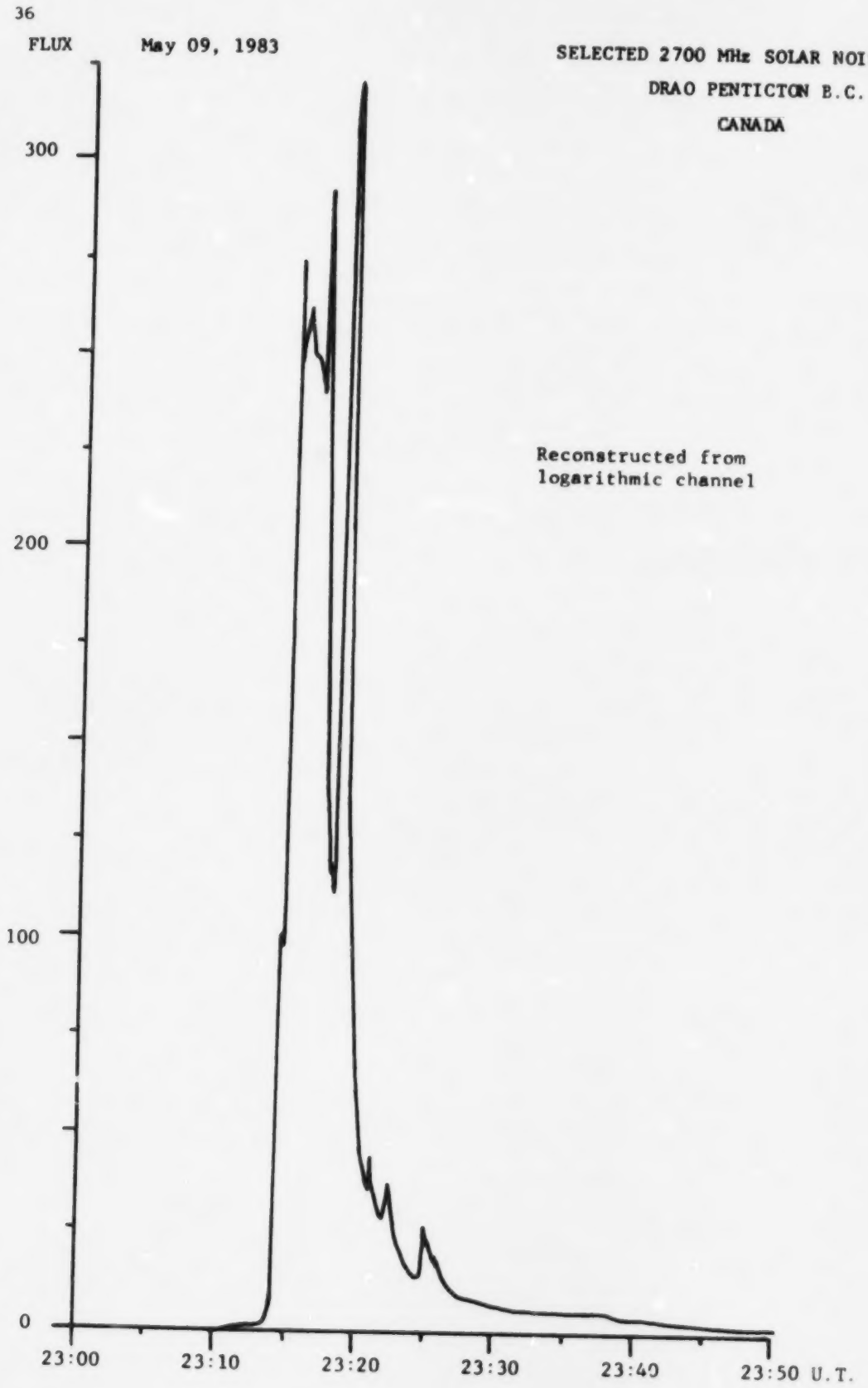
DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
May.				H M	H M	MINUTES		
30	20	GRF	SimpIII GRF	11 05	11 35	90	2.6	1.3**
	┌21	GRF	SimpIIIA GRF	13 40	14 50	100	4.0	2.0**
	└ 1	S	Simple I	13 40.2	13 41	1.5	2.4	1.2**
	┌21	GRF	SimpIIIA GRF	15 28	17 00	180	6.2	3.1
	└ 1	S	Simple I	16 28.3	16 28.6	1	2.6	1.3
	┌21	GRF	SimpIIIA GRF	22 55	00 35	>170	13.6	---*
	└20	GRF	SimpIII GRF	00 02	00 09	30	17.2	7.4*
31	┌21	GRF	SimpIIIA GRF	12 40	12 55	50	4.0	2.0**
	└ 2	S/F	Simple IF	12 46.5	12 47.2	5	8.0	4.0**
	┌ 3	S	Simple II	13 48.5	13 50	3.5	20.0	8.0**
	└29	PBI	P.B. Increase	13 52	13 52	38	7.2	3.6
	┌23	GPF	SimpIIIAF GRF	14 50	18 40	405	8.4	3.8
	|20	GRF	SimpIII GRF	14 57	15 00	45	5.2	2.4
	|22	GRF	SimpIIIF GRF	18 10	18 14.9	16	12.0	4.0
	└20	GRF	SimpIII GRF	20 15	20 18	15	4.5	1.4
	20	GPF	SimpIII GRF	23 40	23 50	40	2.6	1.4*

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

MAY 07, 1983

SELECTED 2800 MHz SOLAR NOISE BURST
A.R.O. OTTAWA, ONT.
CANADA



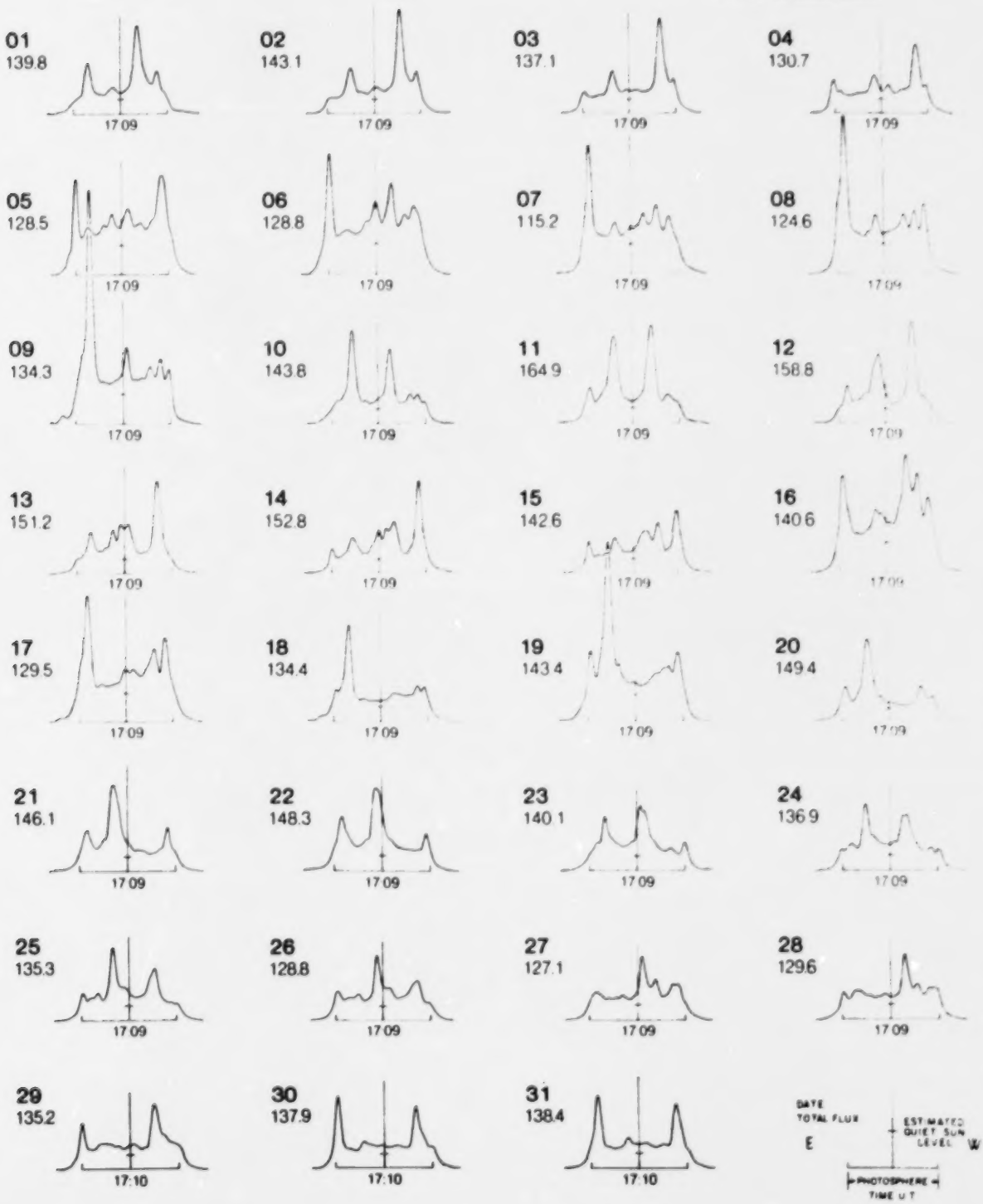

FLUX
May 09, 1983
SELECTED 2700 MHz SOLAR NOISE BURST
DRAO PENTICTON B.C.
CANADA
Reconstructed from
logarithmic channel
300
200
100
0
23:00
23:10
23:20
23:30
23:40
23:50 U.T.

EAST-WEST SOLAR SCANS

MAY 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



June 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Jun.	Series C	Series C	Series D
1	127.6	131.3	118.2
2	135.1#	139.0#	125.1#
3	135.4	139.3	125.4
4	145.0	149.2	134.3
5	163.0#	167.9#	151.1#
6	185.8	191.4	172.3
7	174.3	179.5	161.5
8	168.6	173.7	156.3
9	154.7#	159.5#	143.5#
10	146.0#	150.5#	135.4#
11	135.0	139.2	125.3
12	130.5	134.5	121.0
13	124.3	128.3	115.5
14	122.5#	126.4#	113.8#
15	124.7	128.7	115.8
16	124.8#	128.8#	115.9#
17	126.6	130.7	117.6
18	126.3	130.5	117.4
19	129.5	133.8	120.4
20	132.5	136.9	123.2
21	139.4	144.0	129.6
22	144.1	148.9	134.0
23	145.0	149.8	134.8
24	137.2#	141.7#	127.5#
25	136.9	141.4	127.3
26	139.4b	144.1b	129.7b
27	132.6	137.1	123.4
28	125.1#	129.4#	116.5#
29	124.7	128.9	116.0
30	122.6	126.8	114.1
Mean:	138.6	143.0	128.7

Corrected for burst.
b) Interpolated

June 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Jun.	14:00	17:00	20:00	19:35
1	128.4#	127.6	127.8	128.6
2	132.2	135.1#	137.9	133.3#
3	135.4#	135.4	133.7	131.7#
4	144.2	145.0	147.8#	-----
5	161.4	163.0#	164.2#	-----
6	181.0a	185.8	185.5#	180.3#
7	177.7	174.3	174.6#	173.7#
8	177.6	168.6	164.5	164.2#
9	153.4	154.7#	154.9#	153.0#
10	149.8#	146.0#	143.2	141.3
11	136.0#	135.0	134.9	-----
12	126.9	130.5	130.1	-----
13	123.2	124.3	124.8	124.1
14	121.8	122.5#	122.7#	122.5#
15	124.1	124.7	125.9	125.1
16	125.4	124.8#	125.6	124.4
17	126.1	126.6	126.8#	124.7#
18	126.6	126.3	126.9	-----
19	126.7	129.5	129.7#	-----
20	130.8	132.5	134.0	132.3
21	134.8	139.4	141.9	141.4
22	141.7	144.1	146.3	143.9
23	145.0	145.0	146.1	144.2
24	138.7	137.2#	137.3	136.7
25	135.3	136.9	137.6#	-----c
26	139.8	139.4b	139.0	-----c
27	132.8	132.6	131.8	130.3#
28	125.2#	125.1#	127.2	125.8
29	121.9	124.7	127.3	126.2
30	120.9	122.6	122.2#	120.6#
Mean:	138.2	138.6	139.1	137.6

Corrected for burst.
a) Extrapolated
b) Interpolated
c) No observation

June 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jun.			H M	H M	MINUTES		
1	21 GPF	SimpIIIA GRF	12 47	12 55	195	7.8	2.2**
	1 S	Simple I	12 48.5	12 50	5	8.0	3.7**
	20 GRF	SimpIII GRF	20 50	22 15	190	4.4	2.2
2	21 GRF	SimpIIIA GRF	14 35	15 30	180	5.8	2.6
	1 S	Simple I	15 24	15 26	6	5.8	3.0
	3 S	Simple II	15 34	15 35	5	11.2	3.2
	8 S	Spike	18 16.1	18 16.3	0.3	2.6	---
	20 GRF	SimpIII GRF	19 10	19 30	50	2.8	1.5
	20 GRF	SimpIII GRF	21 35	22 10	145	2.6	1.3
3	20 GRF	SimpIII GRF	00 25	00 38	30	5.6	2.0*
	27A RF	Rise & Fall A	11 10	Indet.	350	7.0	5.2**
	24 R	Rise	11 10	11 55	45	7.0	3.5**
	4 S/F	Simple IIF	11 42.3	11 42.7	3.5	37.0	9.2**
	24P R	Post Rise	11 55	-- --	190	7.0	---**
	4 S/F	Simple IIF	12 54	12 54.4	2	31.0	7.8**
	8 S	Spike	13 36.8	13 37	0.6	2.2	---**
	2 S/F	Simple IF	14 23	14 23.9	1.2	2.8	1.0
	2 S/F	Simple IF	14 28	14 28.2	2	6.2	1.6
	26 FAL	Fall	15 05	17 00	115	-7.0	-3.0
	22 GRF	SimpIIIF GRF	17 35	18 25	145	3.4	1.7
	240 R	Rise Only	20 40	20 50	10	2.8	1.6
	20 GRF	SimpIII GRF	21 00	22 20	180	4.4	2.2
4	20 GRF	SimpIII GRF	00 30	01 40	>80	6.0	---*
	1 S	Simple I	13 35	13 36	5	3.0	1.3**
	20 GRF	SimpIII GRF	13 42	13 45	18	2.2	1.1**
	8 S	Spike	16 54.9	16 55	0.3	1.6	---
	1 S	Simple I	16 56	16 56.5	1	2.6	1.3
	240 R	Rise Only	17 55	18 10	15	2.8	---
	20 GRF	SimpIII GRF	18 15	18 22	15	2.0	1.0
	4 S/F	Simple IIF	19 49	19 55.8	15	21.0	10.5
	29 PBI	P.B. Increase	20 04	20 04	50	6.2	3.1
	1 S	Simple I	21 47	21 47.5	1.3	7.4	4.8
	240 R	Rise Only	22 28	22 40	12	3.6	1.8
	20 GRF	SimpIII GRF	23 40	00 25	130	5.0	2.3*
5	8 S	Spike	12 28	12 28.2	0.5	3.2	1.6**
	240 R	Rise Only	13 15	13 35	20	3.2	1.8**

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

June 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHz

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jun.			H M	H M	MINUTES		
5	1 S	Simple I	14 12.8	14 13.8	2	2.4	1.2*
	8 S	Spike	14 42.9	14 43	0.5	3.6	1.9
	┌ 27AF PF	Rise&Fall AF	15 30	Indet.	315	6.6	5.8
	├ 24 R	Rise	15 30	15 42	12	6.6	1.4
	├ 24P P	Post Rise	15 42	-- --	268	6.6	---
	├┌ 4 S/F	Simple IIF	15 57.5	15 59.7	4	11.0	6.2
	├└29 PBI	P.B. Increase	16 01.5	16 01.5	8	3.2	1.6
	├ 8 S	Spike	18 02.2	18 02.4	0.8	4.8	2.4
	├┌21 GRF	SimpIIIA GRF	19 34	19 41	15	2.0	1.0
	├└ 1 S	Simple I	19 37	19 40	4	6.4	4.2
	├ 1 S	Simple I	19 59	19 59.4	1	5.2	2.6
	└ 26 FAL	Fall	20 10	20 45	35	-4.6	-2.3
	┌21 GRF	SimpIIIA GRF	21 55	22 27	130	11.2	5.0
	└ 2 S/F	Simple IF	22 17	22 18	4	6.4	4.6
6	240 R	Rise Only	00 10	00 20	10	4.2	1.2*
	240 R	Rise Only	12 00	12 02	2	3.2	1.6**
	┌21 GRF	SimpIIIA GRF	12 10	12 40	72	3.2	1.4**
	└ 8 S	Spike	13 19.8	13 20	0.6	6.4	4.2**
	┌28 PPE	Precursor	13 29.5	13 36	6.5	9.0	6.0**
	┼46F C	Complex F (-)	13 36	14 01	31	197.0	59.0**
	└29 PBI	P.B. Increase	14 17	14 17	175	20.0	5.0
	┌21 GRF	SimpIIIA GRF	17 35	18 00	40	3.2	1.6
	└ 8 S	Spike	17 43	17 43.3	0.6	2.6	1.3
	22 GRF	SimpIIIF GRF	19 05	20 00	125	4.2	2.5
	20 GRF	SimpIII GRF	21 25	21 35	25	3.0	1.5
	1 S	Simple I	22 25	22 27	8	3.2	1.4
	20 GRF	SimpIII GRF	22 57	23 00	18	2.8	1.4*
7	┌21 GRF	SimpIIIA GRF	00 10	00 28	100	10.4	4.8*
	└ 1 S	Simple I	01 25	01 28	6	3.4	1.7*
	┌23 GRF	SimpIIIAF GRF	14 05	15 50	175	8.6	4.2
	└ 3 S	Simple II	14 11.5	14 11.8	2	31.0	7.0*
	20 GRF	SimpIII GRF	18 10	19 00	130	3.2	1.6
	1 S	Simple I	20 25	20 28	5	2.0	1.0
	20 GRF	SimpIII GRF	20 50	21 00	40	5.6	3.0
8	20 GRF	SimpIII GRF	00 45	01 13	>60	14.6	---*
	┌ 26A FAL	Fall A	11 20	16 10	290	-20.4	-10.2**

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

June 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jun.			H M	H M	MINUTES		
8	|r21	GRF	SimpIIIA GRF	12 00	13 00	120	13.2	5.5**
	⌊⌊ 1	S	Simple I	13 02.5	13 03.8	4	7.4	2.8**
	20	GRF	SimpIII GRF	19 20	19 27	30	2.6	1.4
	20	GRF	SimpIII GRF	21 05	21 25	100	3.2	2.4
9	22	GRF	SimpIIIF GRF	12 25	12 40	45	4.6	2.2**
	20	GRF	SimpIII GRF	16 25	17 00	70	3.8	1.8
	r 21	GRF	SimpIIIA GRF	18 05	19 50	380	9.8	3.8
	| 1	S	Simple I	20 51.5	20 51.7	9	2.0	1.0
	|r46F	C	Complex F (-)	21 58	22 03.2	8	147.0	26.4
	⌊⌊29	PBI	P.B. Increase	22 06	22 06	25	9.6	2.4
10	r 26A	FAL	Fall A	10 50	19 10	500	-14.6	---
	|r21	GRF	SimpIIIA GRF	12 00	14 24	420	24.4	11.0
	|| 4	S/F	Simple IIF	13 30	13 31.5	10	122.0	17.0**
	⌊⌊ 4	S/F	Simple IIF	17 58	17 59	4	45.0	11.2
	r21	GRF	SimpIIIA GRF	20 00	20 45	100	5.8	2.9
	⌊ 8	S	Spike	20 44.7	20 44.7	0.1	16.0	---
11	1	S	Simple I	00 10.8	00 10.9	1	3.8	1.9*
	1	S	Simple I	11 48	11 50	6	2.0	1.0**
	22	GRF	SimpIIIF GRF	12 30	13 20	170	2.6	---**
12	240	F	Rise Only	14 15	14 55	40	3.2	1.6
	40	F	Fluctuations	22 29	22 34.5	8	149.0	---
13	1	S	Simple I	12 21.6	12 21.6	1	5.0	2.4**
	1	S	Simple I	13 40	13 43	10	1.8	0.9**
	1	S	Simple I	15 29.5	15 30	1.5	6.4	3.0
	1	S	Simple I	17 10.5	17 11	1	3.2	2.4
	2	S/F	Simple IF	19 36	19 37.2	10	4.8	2.6**
14	20	GRF	SimpIII GRF	14 30	Indet.	75	2.0	---
	r 21	GRF	SimpIIIA GRF	16 40	16 48	220	5.8	2.9
	| 2	S/F	Simple IF	16 46	16 46.2	1.2	4.0	2.0
	|r 1A	S	Simple IA	16 56	17 02	10	2.2	1.4
	⌊⌊ 2	S/F	Simple IF	16 57.5	16 58.5	3.5	4.0	1.4
15	20	GRF	SimpIII GRF	13 35	13 45	25	2.2	1.1**
	20	GRF	SimpIII GRF	14 10	14 30	70	3.2	1.6
16	20	GRF	SimpIII GRF	12 35	12 50	55	2.2	1.1**
	r21	GRF	SimpIIIA GRF	14 35	15 50	195	5.4	2.4
	| 2	S/F	Simple IF	14 46	14 47.5	5	6.8	3.2

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

June 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHz

DATE	KEY	CLASS		START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jun.				H M	H M	MINUTES		
16	⌊46F	C	Complex F (-)	15 34.2	15 36	7	36.0	15.8
	1	S	Simple I	21 14	21 14.2	1	2.0	1.0
17	⌈46F	C	Complex F (-)	00 56	00 59	5	34.0	15.9*
	⌊29	PBI	P.B. Increase	01 01	01 01	50	3.0	1.5*
	20	GRF	SimpIII GRF	12 55	13 10	65	1.8	1.0**
	20	GRF	SimpIII GRF	14 05	15 20	145	2.6	1.3
	20	GRF	SimpIII GRF	17 15	18 40	225	2.4	---
	20	GRF	SimpIII GRF	21 20	22 00	95	3.6	2.8
18	1	S	Simple I	14 54	14 55	5	4.2	2.0
19	1	S	Simple I	12 56	12 57	3	1.8	1.2**
	2	S/F	Simple IF	13 00.5	13 01.2	2	2.0	---**
	1	S	Simple I	15 20.8	15 21	1	1.8	0.8
	240	R	Rise Only	16 00	16 20	20	2.2	1.1
	40	F	Fluctuations	17 42	17 45.8	5	6.8	---
	20	GRF	SimpIII GRF	18 45	19 00	50	2.2	1.1
	22	GRF	SimpIIIF GRF	19 55	20 01	30	2.2	1.5
	1	S	Simple I	20 40.9	20 41.2	1	7.0	3.2
	⌈21	GRF	SimpIIIA GRF	22 00	23 50	150	4.8	2.0
	⌊ 2	S/F	Simple IF	23 38.5	23 39	6	4.8	1.6*
20	20	GRF	SimpIII GRF	00 40	00 55	75	2.4	1.2*
	⌈21	GRF	SimpIIIA GRF	14 20	15 20	120	3.6	2.6
	⌊ 4	S/F	Simple IIF	14 23	14 24	5	16.2	5.4
	20	GRF	SimpIII GRF	20 20	20 40	80	2.0	1.5
	⌈21	GRF	SimpIIIA GRF	21 50	22 40	100	2.2	1.7
	⌊ 2	S/F	Simple IF	22 14	22 16	2.5	2.0	0.8
21	240	R	Rise Only	14 05	14 20	15	2.4	1.2
	1	S	Simple I	15 37.5	15 38.2	1.5	2.8	1.9
	1	S	Simple I	16 01.3	16 01.8	2	3.8	1.8
22	⌈ 3	S	Simple II	17 58	18 00	4	21.0	7.0
	⌊29	PBI	P.B. Increase	18 02	18 02	30	5.4	2.4
	⌈ 3	S	Simple II	18 41	18 42	4	11.0	5.0
	⌊29	PBI	P.B. Increase	18 45	18 45	15	3.0	1.4
	⌈ 1A	S	Simple IA	20 52	20 53	10	2.4	1.2
	⌊ 1	S	Simple I	20 54	20 55	2	2.0	1.0
	⌈21	GRF	SimpIIIA GRF	21 30	22 10	180	2.8	1.6
	⌊ 1	S	Simple I	21 48	21 49	2	2.8	1.2

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

June 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jun.			H M	H M	MINUTES		
23	4	S/F Simple IIF	14 36	14 36.9	2	10.8	5.4
	29	PBI P.B. Increase	14 38	14 38	30	2.4	1.2
	21	GRF SimpIIIA GRF	20 05	21 00	210	6.8	4.6
	3	S Simple II	21 53.5	21 54.5	2.5	11.8	5.8
	29	PBI P.B. Increase	21 56	21 56	15	3.0	1.5
24	21	GRF SimpIIIA GRF	12 25	12 35	45	3.0	1.5**
	1	S Simple I	12 33	12 33	1	3.0	1.5**
	20	GRF SimpIII GRF	16 10	17 00	120	2.2	1.5
	20	GRF SimpIII GRF	22 10	22 40	105	3.4	1.7*
25	21	GRF SimpIIIA GRF	11 20	12 05	115	3.0	---**
	46F	C Complex F (-)	11 25	11 27	13	50.0	14.6**
	22	GRF SimpIIIF GRF	15 35	16 14	70	2.8	2.0**
	21	GRF SimpIIIA GRF	18 35	20 45	>260	6.4	---**
	4	S/F Simple IIF	18 50.2	18 51.1	3.8	47.0	23.0**
	+30	PBI P.B. Incr. A	18 54	18 54	10	6.8	3.4**
	1	S Simple I	18 56	18 56.5	2	2.6	1.4**
	4	S/F Simple IIF	20 49	20 52	9	86.0	28.0**
	29	PBI P.B. Increase	20 58	20 58	30	5.8	2.9**
26	3	S Simple II	13 29	13 30	6	23.0	8.0**
	-	- Incomplete	E14 17	Indet.	>31	23.0	---**
	20	GRF SimpIII GRF	E21 15	21 25	>110	6.0	3.0**
27	8	S Spike	16 06	16 06.1	0.2	8.6	---
	2	S/F Simple IF	18 02	18 05.5	6	4.4	1.5
	20	GRF SimpIII GRF	18 47	19 05	65	2.0	1.0
	1	S Simple I	21 06	21 07	8	5.4	2.2
	8	S Spike	21 26.7	21 27	0.5	7.0	3.5
28	1	S Simple I	01 30	01 31.2	3.5	6.8	2.6*
	27	RF Rise & Fall	11 10	Indet.	145	2.8	2.3**
	24	R Rise	11 10	11 55	45	2.8	1.4**
	24P	R Post Rise	11 45	-- --	90	2.8	---**
	26	FAL Fall	13 25	13 35	10	-2.8	-1.8**
	20	GRF SimpIII GRF	13 45	14 20	55	2.0	1.0**
	20	GRF SimpIII GRF	15 00	15 55	200	5.8	2.9
	8	S Spike	22 32.3	22 32.5	0.7	3.0	1.5
29	20	GRF SimpIII GRF	00 00	00 50	100	2.8	1.4*
	20	GRF SimpIII GRF	12 00	12 47	110	3.2	1.1**

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

June 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jun.				H M	H M	MINUTES		
29	240	R	Rise Only	15 30	15 55	25	2.0	1.0
	240	R	Rise Only	18 50	18 55	5	2.8	1.4
	1	S	Simple I	19 46.2	19 46.8	1	5.6	2.8
	1	S	Simple I	21 55	21 55.5	1	2.2	1.1**
	46F	C	Complex F (-)	22 27.5	22 37.5	23	30.0	8.6**
	2	S/F	Simple IF	23 40	23 45	8	8.6	4.3*
30	21	GRF	SimpIIIA GRF	17 40	18 20	225	3.8	1.9
	4	S/F	Simple IIF	18 10.5	18 16	11	13.0	5.0

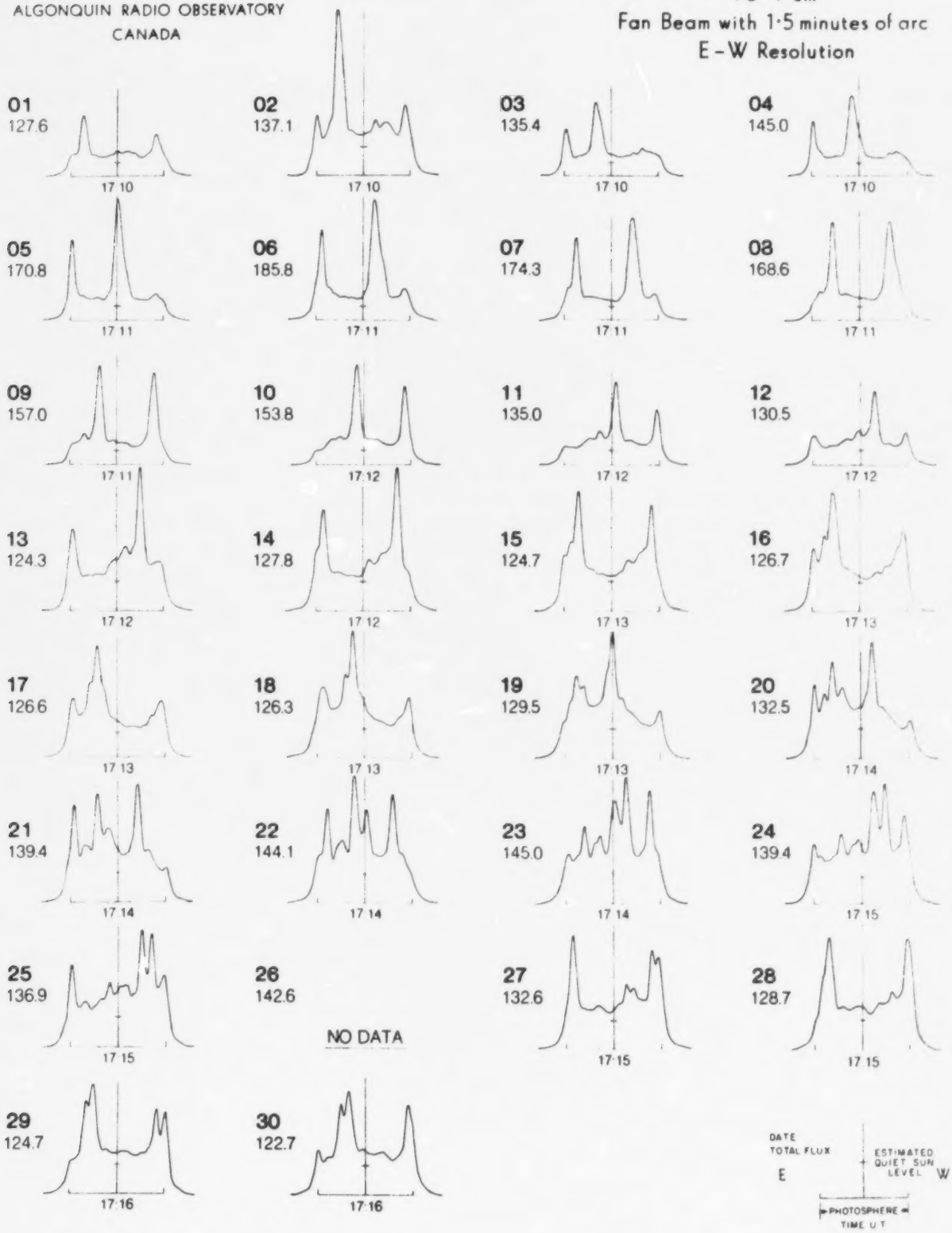
* Only observed at DRAC, Penticton.
**Only observed at ARO, Lake Traverse.

EAST-WEST SOLAR SCANS

JUNE 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



July 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Jul.	Series C	Series C	Series D
1	120.0#	124.1#	111.7#
2	121.3	125.4	112.9
3	127.2	131.5	118.3
4	132.7	137.2	123.5
5	127.8	132.1	118.9
6	128.0	132.4	119.2
7	128.3	132.7	119.4
8	123.7	127.9	115.1
9	119.1	123.1	110.8
10	119.1	123.1	110.8
11	121.6	125.7	113.1
12	120.7	124.7	112.2
13	119.6	123.5	111.1
14	120.4	124.4	112.0
15	120.6	124.6	112.1
16	117.4	121.3	109.2
17	116.2	120.0	108.0
18	112.7#	116.4#	104.8#
19	115.7	119.5	107.5
20	121.1	125.1	112.6
21	124.1#	128.1#	115.3#
22	134.6	138.9	125.0
23	128.8#	132.9#	119.6#
24	132.1#	136.3#	122.7#
25	132.5#	136.7#	123.0#
26	124.9#	128.9#	116.0#
27	119.4	123.1	110.8
28	123.3	127.1	114.4
29	134.3#	138.5#	124.6#
30	140.0	144.3	129.9
31	148.6#	153.1#	137.8#
Mean:	125.0	129.1	116.2

Corrected for burst.

July 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-APO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - APO			PENTICTON - DRAO
Jul.	14:00	17:00	20:00	19:35
1	119.8#	120.0#	120.2	-----
2	119.9	121.3	123.7	-----
3	125.1	127.2	127.1	-----
4	129.2	132.7	132.0#	131.3#
5	130.5	127.8	131.8	131.8
6	127.1	128.0	125.6	124.2
7	125.9	128.3	127.4	127.4
8	124.5	123.7	123.4	118.8
9	119.9	119.1	119.7	-----
10	118.4	119.1	120.4	-----
11	121.6#	121.6	121.6#	118.8#
12	116.6	120.7	120.2#	118.2#
13	119.3	119.6	119.3#	118.0#
14	119.3	120.4	119.9	117.4
15	121.7	120.6	119.3	118.0
16	118.2	117.4	117.1#	-----
17	116.7	116.2	114.1	-----
18	112.8	112.7#	112.4#	112.4
19	113.6	115.7	115.2#	112.6#
20	119.1	121.1	121.1	119.6
21	124.4	124.1#	124.3#	123.8#
22	131.4	134.6	134.1#	132.8#
23	128.3#	128.8#	126.6	-----
24	129.5	132.1#	132.3#	-----
25	132.9	132.5#	131.6	130.8
26	124.1#	124.9#	124.5#	123.2#
27	120.7	119.4	121.4	119.8
28	124.0#	123.3	126.6	123.6#
29	133.1#	134.3#	136.1	133.4
30	138.2	140.0	140.9	-----
31	147.2	148.6#	150.4#	-----
Mean:	124.3	125.0	125.2	122.8

Corrected for burst.

July 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2600 MHz

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jul.			H M	H M	MINUTES		
1	21	GPF SimpIIIA GRF	13 15	13 50	175	7.0	3.5**
	4	S/F Simple IIF	13 32	13 33.5	12	36.0	11.4**
	31	AbS P.B. Decrease	16 10	16 45	90	-4.2	-2.1
	22	GRF SimpIIIF GRF	21 10	22 35	210	2.8	1.0
3	1	S Simple I	00 25	00 25.1	1	3.6	1.6*
4	21	GRF SimpIIIA GRF	11 35	11 55	35	2.8	1.2**
	1	S Simple I	11 46.5	11 47	3	5.2	1.7**
	21	GRF SimpIIIA GRF	14 45	15 20	50	2.8	1.4
	3	S Simple II	14 48	14 49	4	41.0	14.0
	29	PBI P.B. Increase	14 52	14 52	17	5.2	1.7
	20	GRF SimpIII GRF	17 30	17 40	40	2.8	1.4
	20	GRF SimpIII GRF	18 35	19 40	195	4.4	2.2
	20	GRF SimpIII GRF	22 00	23 55	>230	6.2	---*
5	260	FAL Fall Only	15 10	15 55	45	-2.8	-1.4
	240	R Rise Only	18 45	19 00	15	2.8	1.4
	1	S Simple I	22 31.2	22 31.8	2	2.4	0.8
6	20	GRF SimpIII GRF	14 50	15 40	90	2.4	1.4**
	20	GRF SimpIII GRF	20 55	21 05	35	2.8	1.4
	20	GRF SimpIII GRF	22 30	22 40	30	2.4	1.2
7	20	GRF SimpIII GRF	00 00	00 25	60	2.4	1.2*
8	1	S Simple I	01 16	01 16.5	2	3.0	1.5*
10	20	GRF SimpIII GRF	15 00	15 15	120	5.4	1.8
	21	GRF SimpIIIA GRF	17 20	18 05	180	4.0	---
	21	GRF SimpIIIA GRF	18 41	19 05	80	9.2	4.8
	46F	C Complex F (-)	18 41	18 50	13	19.4	8.2
	1	S Simple I	22 22	22 23	5	5.2	2.5
11	20	GRF SimpIII GRF	12 45	13 00	160	10.4	5.2**
	20	GRF SimpIII GRF	15 50	16 15	70	2.2	1.1
	22	GRF SimpIIIF GRF	17 20	18 50	470	7.6	3.8
12	240	R Rise Only	15 10	16 30	80	3.6	1.8
	20	GRF SimpIII GRF	18 10	18 50	65	2.8	1.4
	20	GRF SimpIII GRF	19 25	20 00	95	3.0	1.6
	20	GRF SimpIII GRF	22 00	22 55	180	2.4	1.8*
13	1	S Simple I	16 56.5	16 57.5	3	2.4	0.8
	21	GRF SimpIIIA GRF	19 20	20 00	105	2.6	1.3
	1	S Simple I	19 46.5	19 47.2	2	3.6	1.2

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

July 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHz

DATE Jul.	KEY		CLASS	START U.T. H M	MAXIMUM U.T. H M	DURATION MINUTES	PEAK FLUX	MEAN FLUX
14	4	S/F	Simple IIF	11 28	11 31.5	8	13.4	3.4**
	20	GRF	SimpIII GRF	12 15	12 16.5	20	2.6	1.3**
	240	R	Rise Only	21 35	21 55	20	2.0	1.0
	21	GRF	SimpIIIA GRF	22 30	22 35	30	2.0	1.0
	1	S	Simple I	22 34	22 35.8	2	4.4	2.2
	21	GRF	SimpIIIA GRF	23 20	00 05	>150	4.4	---*
	1	S	Simple I	01 02.2	01 03	1.5	4.4	1.4*
15	1	S	Simple I	11 46.9	11 47	2	3.6	1.7**
16	20	GRF	SimpIII GRF	19 30	21 00	180	2.2	1.0
17	27A	RF	Rise & Fall A	12 50	Indet.	270	2.6	2.4
	24	R	Rise	12 50	13 10	20	2.6	1.3
	24P	R	Post Rise	13 10	-- --	230	2.6	---
	20	GRF	SimpIII GRF	14 52	14 56	20	2.6	1.3
	20	GRF	SimpIII GRF	15 20	15 25	13	2.0	1.0
	26	FAL	Fall	17 00	17 20	20	-2.6	-1.3
	20	GRF	SimpIII GRF	18 10	18 16	50	2.0	1.0
	20	GRF	SimpIII GRF	19 18	19 27	30	2.0	1.0
18	22	GRF	SimpIIIF GRF	15 55	16 45	110	4.4	1.5
	20	GRF	SimpIII GRF	19 35	20 10	150	4.0	2.0
19	240	R	Rise Only	13 55	14 35	40	2.4	---**
	20	GRF	SimpIII GRF	14 40	15 20	90	2.2	1.5
	20	GRF	SimpIII GRF	17 05	17 20	55	3.6	1.8
	20	GRF	SimpIII GRF	19 05	19 30	85	2.4	1.4
21	27A	RF	Rise & Fall A	14 55	Indet.	200	2.6	2.4
	24	R	Rise	14 55	15 05	10	2.6	1.3
	24P	R	Post Rise	15 05	-- --	170	2.6	---
	20	GRF	SimpIII GRF	17 30	17 35	13	2.0	1.1
	26	FAL	Fall	17 55	18 15	20	-2.6	-1.3
	20	GRF	SimpIII GRF	19 20	20 00	165	7.2	3.4
	240	R	Rise Only	22 45	23 25	40	4.6	2.3*
22	21	GRF	SimpIIIA GRF	14 39	14 41	40	4.6	2.3
	40	F	Fluctuations	14 41	14 41.3	2	9.6	---
	1	S	Simple I	16 34	16 35.9	4	4.4	1.6
	20	GRF	SimpIII GRF	17 35	18 20	95	2.8	1.4
	20	GRF	SimpIII GRF	19 20	19 30	65	2.0	1.6
	32	ABS	Absorption	20 30	21 35	100	-3.8	-2.4

* Only observed at DRAC, Penticton.
**Only observed at ARO, Lake Traverse.

July 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jul.				H M	H M	MINUTES		
23	20	GRF	SimpIII GRF	10 55	11 00	45	5.0	2.6**
	20	GRF	SimpIII GRF	12 15	13 25	180	3.6	2.4**
	20	GRF	SimpIII GRF	15 30	16 30	150	2.0	1.5
	20	GRF	SimpIII GRF	18 55	19 20	60	2.0	1.0
	20	GRF	SimpIII GRF	23 30	01 10	>145	6.2	---*
24	22	GRF	SimpIIIF GRF	11 45	12 50	125	3.0	1.8**
	20	GRF	SimpIII GRF	14 55	16 40	220	6.4	3.2
	20	GRF	SimpIII GRF	18 45	19 10	100	2.0	---
	21	GRF	SimpIIIA GRF	21 45	22 30	175	6.8	3.4
	46F	C	Complex F (-)	21 48	21 56.5	17	118.0	42.4
25	20	GRF	SimpIII GRF	16 40	17 25	90	2.4	1.2**
	22	GRF	SimpIIIF GRF	21 35	21 40	20	2.6	---
26	1	S	Simple I	11 52	11 54.2	10	9.4	3.1**
	20	GRF	SimpIII GRF	13 25	13 50	150	2.2	1.8**
	20	GRF	SimpIII GRF	16 50	19 00	220	3.0	1.5
	20	GRF	SimpIII GRF	21 00	21 45	95	2.2	1.1
	20	GRF	SimpIII GRF	22 45	23 55	135	2.0	1.3*
27	27F	RF	Rise & Fall F	12 45	Indet.	240	2.6	2.3**
	24	R	Rise	12 45	13 00	15	2.6	1.5**
	24P	R	Post Rise	12 50	-- --	190	2.8	---**
	26	FAL	Fall	16 10	16 45	35	-2.6	-1.5
	40	F	Fluctuations	21 25	21 25.7	4	5.4	---
	20	GRF	SimpIII GRF	23 35	23 45	45	5.0	2.5*
28	21	GRF	SimpIIIA GRF	12 05	13 00	145	3.8	2.0**
	1	S	Simple I	12 07	12 09	5	6.0	---**
	24O	R	Rise Only	17 20	17 40	20	2.4	1.2
	20	GRF	SimpIII GRF	18 55	19 20	55	3.0	1.7
29	20	GRF	SimpIII GRF	13 05	13 50	80	2.6	---**
	20	GRF	SimpIII GRF	16 00	17 05	170	5.0	2.5
	21	GRF	SimpIIIA GRF	21 00	21 15	150	7.0	4.0
	1	S	Simple I	21 04	21 04.5	1	2.4	1.2
	1	S	Simple I	21 07	21 07.6	1.5	8.4	2.8
30	1	S	Simple I	11 21.8	11 22.3	1.5	4.4	2.1**
	8	S	Spike	11 23.8	11 23.9	0.2	8.8	---**
	46F	C	Complex F (-)	11 26	11 27.8	4	35.0	11.4**
	21	GRF	SimpIIIA GRF	14 10	15 30	110	4.2	2.1

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

July 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Jul.			H M	H M	MINUTES		
30	146F	C	Complex F (-)	15 10	15 15.5	10	96.0	32.0
	4	S	Spike	15 35	15 35.1	0.3	12.2	6.1
	20	GRF	SimpIII GRF	16 25	16 42	55	2.8	1.4
	40	F	Fluctuations	18 25.5	18 27	1.9	42.0	---
	240A	R	Rise Only A	21 48	22 14	26	3.4	1.7
	28	PRE	Precursor	21 49	21 49.5	2.5	6.2	---
	4	S/F	Simple IIF	21 51.5	21 54.5	12	63.0	17.6
31	21	GRF	SimpIIIA GRF	00 20	01 50	>100	13.0	---*
	1	S	Simple I	01 46	01 46.2	1	8.8	4.0*
	23	GRF	SimpIIIAF GRF	14 00	17 40	400	8.4	4.0
	20	GRF	SimpIII GRF	15 08	15 12	14	3.4	1.4
	1	S	Simple I	17 17	17 18.5	4	5.6	2.8
	1	S	Simple I	17 22.5	17 23.5	2.5	2.2	1.1
	21	GRF	SimpIIIA GRF	21 00	21 45	215	7.8	4.4
	3	S	Simple II	21 26	21 29	6	11.6	5.5
	20	GRF	SimpIII GRF	21 53	21 56	25	3.0	1.4

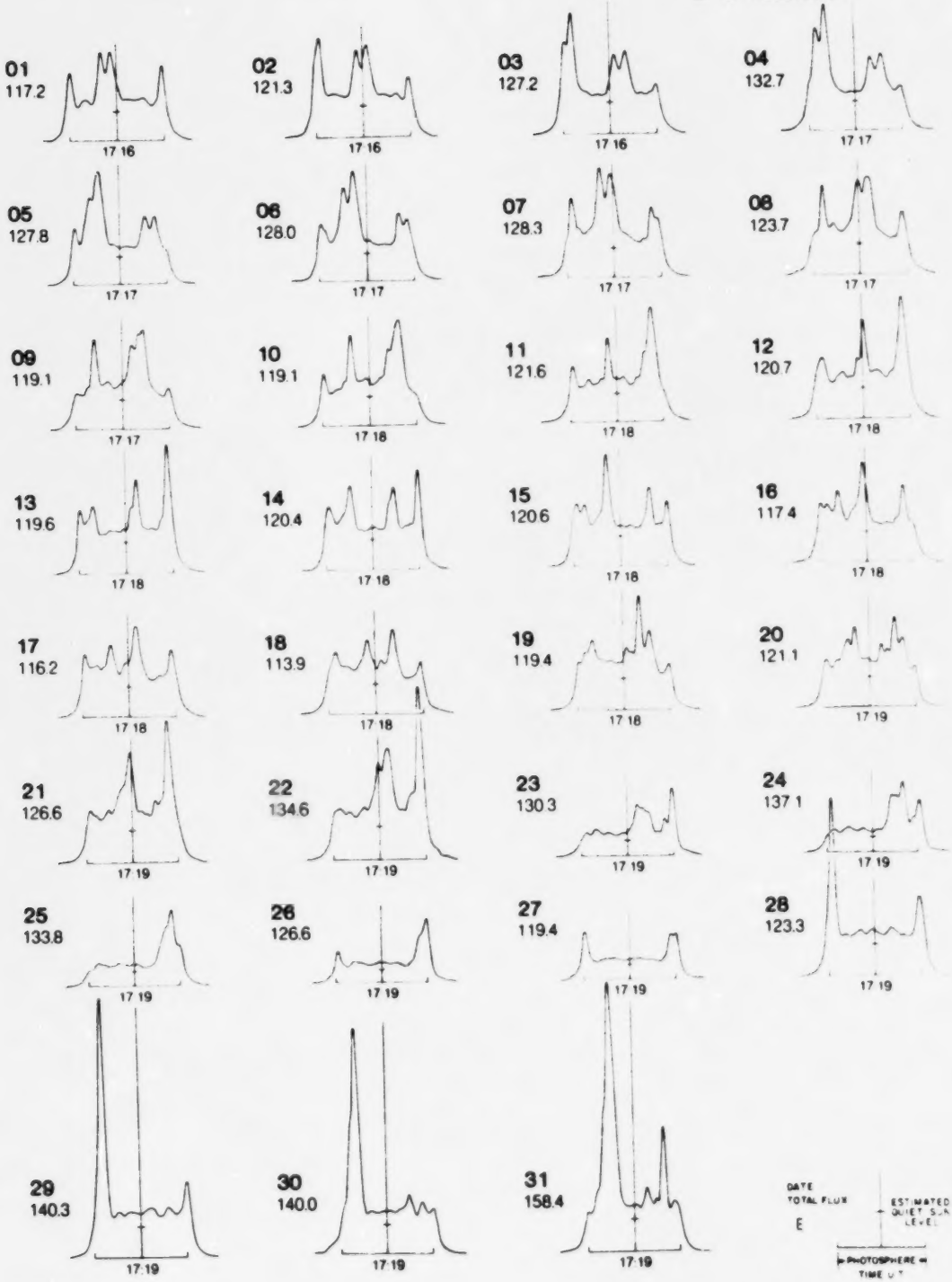
* Only observed at DRAO, Penticton.

EAST-WEST SOLAR SCANS

JULY 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



August 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-APO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Aug.	Series C	Series C	Series D
1	146.7	151.1	136.0
2	141.2#	145.4#	130.9#
3	135.3#	139.4#	125.5#
4	132.7	136.5	122.8
5	132.7	136.5	122.8
6	138.0	142.0	127.8
7	138.0	141.9	127.7
8	137.2	141.0	126.9
9	139.0	142.9	128.6
10	147.6	151.6	136.4
11	147.3	151.3	136.2
12	152.6#	156.7#	141.0#
13	143.6	147.3	132.6
14	138.0#	141.6#	127.4#
15	132.4#	135.8#	122.2#
16	128.9	132.1	118.9
17	123.7	126.8	114.1
18	119.2	122.2	110.0
19	114.9	117.7	105.9
20	115.9	118.7	106.8
21	111.6	114.2	102.8
22	108.3	110.8	99.7
23	108.4	110.8	99.7
24	106.4	108.7	97.8
25	102.0	104.2	93.8
26	103.6	105.8	95.2
27	101.6	103.7	93.3
28	100.8	102.8	92.5
29	103.6	105.7	95.1
30	102.1	104.0	93.6
31	102.3	104.2	93.8
Mean:	124.4	127.5	114.8

Corrected for burst.

August 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Aug.	14:00	17:00	20:00	19:35
1	145.5	146.7	147.2	-----
2	141.3#	141.2#	141.4#	138.8#
3	135.2	135.3#	135.6#	133.3#
4	133.3#	132.7	132.0#	131.0#
5	131.6#	132.7	132.4	130.7
6	132.2	138.0	136.3#	-----
7	137.4#	138.0	137.8	-----
8	139.4a	137.2	138.0	-----
9	135.4	139.0	140.0	138.1
10	146.4	147.6	148.0	143.6
11	147.7	147.3	152.0	149.9
12	153.3#	152.6#	153.8#	149.7#
13	143.4#	143.6	143.3	-----
14	137.7	138.0#	135.1#	-----
15	135.1	132.4#	131.3	129.6
16	129.0#	128.9	129.4	127.9
17	123.8	123.7	122.4#	122.7#
18	119.4	119.2	120.8	118.6
19	114.6	114.9	115.9	114.0
20	115.6	115.9	115.9	-----
21	112.8	111.6	111.0#	-----
22	108.3#	108.3	109.0	107.7
23	107.8	108.4	108.8	105.9
24	106.7	106.4	106.1	104.9
25	102.9	102.0	104.3	101.4
26	104.7	103.6	103.8	100.9
27	101.9	101.6	101.8	-----
28	101.2	100.8	101.1	-----
29	102.8	103.6	102.2	100.9
30	100.8	102.1	104.5#	100.1
31	102.0	102.3	102.5	101.3
Mean:	124.2	124.4	124.7	121.5

Corrected for burst.
a) Extrapolated

August 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE Aug.	KEY		CLASS	START U.T. H M	MAXIMUM U.T. H M	DURATION MINUTES	PEAK FLUX	MEAN FLUX
1	4	S/F	Simple IIF	12 28	12 28.6	3	141.0	33.0**
	21	GRF	SimpIIIA GRF	13 55	Indet.	70	2.8	---**
	1	S	Simple I	14 40	14 41	3	3.4	1.5**
	20	GRF	SimpIII GRF	15 20	15 45	40	3.4	1.4
	21	GRF	SimpIIIA GRF	17 45	18 20	85	2.8	1.4
	1	S	Simple I	17 47.2	17 48	3	3.0	1.5
	22	GRF	SimpIIIF GRF	19 50	19 53	30	2.8	0.9
	20	GRF	SimpIII GRF	23 25	23 40	35	3.4	1.6*
2	20	GRF	SimpIII GRF	12 30	13 44	240	4.4	1.4**
	1	S	Simple I	16 46	16 46.7	4	7.8	2.0
	20	GRF	SimpIII GRF	16 57	16 59.2	11	4.0	1.8
	3	S	Simple II	18 59.7	19 00	1	14.2	6.0
	21	GRF	SimpIIIA GRF	19 12	19 22	55	3.0	1.4
	1	S	Simple I	19 13	19 14	3.5	2.6	1.6
	1	S	Simple I	21 45	21 45.7	1	3.6	1.8
	40	F	Fluctuations	23 28	23 36	27	51.0	---*
	4	S/F	Simple IIF	23 59.5	23 59.9	3	27.0	9.2*
3	1	S	Simple I	12 01	12 01.5	1	4.2	2.0**
	21	GRF	SimpIIIA GRF	14 20	Indet.	200	12.4	---
	47	GB	Grt Burst (-)	14 46	14 50	15	1435.0	379.0
	30	PBI	P.P. Incr. A	15 01	15 01	90	53.0	18.0
	1	S	Simple I	15 13	15 14.5	4	3.0	1.5
	21	GRF	SimpIIIA GRF	17 50	20 35	270	4.6	1.8
	45	C	Complex (-)	20 33	20 33.7	3	2.2	1.0
	45	C	Complex (-)	21 28	21 31	6	13.6	4.4
4	260	FAL	Fall Only	13 10	13 30	20	-2.8	-1.4**
	260	FAL	Fall Only	14 35	15 00	25	-2.9	-1.6
	20	GRF	SimpIII GRF	17 50	18 20	50	2.0	1.0
	21	GRF	SimpIIIA GRF	19 10	19 55	195	4.4	2.0
	1	S	Simple I	21 42	21 44.5	7	2.6	1.7
	40	F	Fluctuations	22 48.2	22 49.4	2	2.6	---
5	1	S	Simple I	11 32	11 33	7	2.6	1.0**
	21	GRF	SimpIIIA GRF	12 43	13 04	150	12.0	7.0**
	4	S/F	Simple IIF	12 43.5	12 45.2	2.5	20.0	9.5**
	40	F	Fluctuations	12 48	12 51.5	13	6.4	---**
	21	GRF	SimpIIIA GRF	17 10	19 05	140	2.6	1.2

* Only observed at DRAC, Penticton.
**Only observed at ARO, Lake Traverse.

August 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE Aug.	KEY	CLASS	START U.T. H M	MAXIMUM U.T. H M	DURATION MINUTES	PEAK FLUX	MEAN FLUX
5	⌞ 1 S	Simple I	17 33.8	17 34	1.5	3.8	1.6
6	⌜21 GRF	SimpIIIA GRF	01 15	01 25	>30	6.8	---*
	⌞40 F	Fluctuations	01 22.9	01 23	3	6.8	---*
	240 R	Rise Only	11 45	12 00	15	2.8	1.4**
	240 R	Rise Only	15 25	15 40	15	2.8	1.4
	240 R	Rise Only	16 40	16 55	15	2.8	1.4
	1 S	Simple I	19 07	19 08	3	2.6	1.3
	⌜27A RF	Rise & Fall A	19 45	Indet.	175	2.6	2.3
	⌊24 R	Rise	19 45	19 55	10	2.6	1.3
	⌊24P R	Post Rise	19 55	-- --	135	2.6	---
	⌊ 1 S	Simple I	21 54	21 56	6	1.6	0.8
	⌞26 FAL	Fall	22 10	22 40	30	-2.6	-1.3
7	⌜21 GRF	SimpIIIA GRF	12 15	12 40	150	8.8	6.2**
	⌊ 1 S	Simple I	12 37	12 38.4	3	4.0	1.8**
	⌞ 1 S	Simple I	13 15	13 17	3	2.4	1.7**
	22 GRF	SimpIIIF GRF	15 20	16 20	80	2.8	1.6
	240 R	Rise Only	21 00	21 30	30	2.8	1.4
	1 S	Simple I	21 32	21 33	4	2.8	1.4
	4 S/F	Simple IIF	21 53	21 57.5	11	88.0	21.0
	⌜240A R	Rise Only A	22 15	22 50	35	5.4	2.7
	⌞ 1 S	Simple I	22 31	22 33.5	6	2.8	1.4
8	22 GRF	SimpIIIF GRF	11 00	11 50	150	4.2	2.1**
	240 R	Rise Only	21 20	21 55	35	2.8	1.4
	45 C	Complex (-)	23 15	23 17	4	10.0	2.6*
9	⌜ 3 S	Simple II	00 06	00 10	7	19.0	9.5*
	⌞29 PBI	P.B. Increase	00 13	00 13	60	7.0	3.3*
	20 GRF	SimpIII GRF	14 00	14 30	80	3.6	---**
10	⌜ 1 S	Simple I	11 20	11 27	10	6.8	3.4**
	⌞29 PBI	P.B. Increase	11 30	11 30	45	4.0	2.0**
	20 GRF	SimpIII GRF	17 05	17 10	15	2.2	1.1
	⌜27A RF	Rise & Fall A	22 25	Indet.	115	2.8	2.4
	⌊24 R	Rise	22 25	22 30	5	2.8	1.4
	⌊24P R	Post Rise	22 30	-- --	85	2.8	---
	⌊ 1 S	Simple I	22 38.7	22 39.3	1	2.4	1.0
	⌊ 1 S	Simple I	22 52	22 53	6	2.8	1.4*
	⌊ 1 S	Simple I	23 53	23 53.5	1.2	5.2	2.4*

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

August 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Aug.			H M	H M	MINUTES		
10	⌞26	FAL Fall	23 55	00 20	25	-2.8	-1.4*
11	20	GPF SimpIII GRF	16 00	16 30	60	2.2	1.4
	⌜240A	R Rise Only A	19 10	19 28	18	4.0	1.8
	| 3	S Simple II	19 10.2	19 11	2	10.4	5.0
	⌞ 3	S Simple II	19 14.1	19 14.7	1.8	32.0	15.0
	20	GRF SimpIII GRF	22 30	22 45	60	2.4	1.2
12	⌜21	GPF SimpIIIA GRF	00 15	00 40	70	5.0	2.5*
	⌞40	F Fluctuations	00 21.7	00 25.9	7	39.0	---*
	⌜23	GRF SimpIIIAF GRF	12 18	12 48	185	7.8	3.8**
	| 2	S/F Simple IF	12 34	12 36.3	4	4.8	2.4**
	| 2	S/F Simple IF	12 42	12 42.4	4	3.6	1.4**
	⌞ 1	S Simple I	13 33	13 34	1.2	2.0	0.8**
	20	GRF SimpIII GRF	16 00	16 03	20	2.8	0.9
	⌜ 23	GRF SimpIIIAF GRF	16 35	18 50	305	8.4	4.2
	|⌜ 4	S/F Simple IIF	17 55	17 58	7	55.0	22.0
	⌞⌞29	PBI P.B. Increase	18 02	18 02	25	12.0	4.4
13	⌜21	GRF SimpIIIA GRF	12 45	13 45	80	21.0	7.0**
	⌞20	GRF SimpIII GRF	13 18	13 23.5	23	5.2	2.4**
	⌜ 4	S/F Simple IIF	18 09	18 13.2	16	117.0	44.0
	⌞29	PBI P.B. Increase	18 25	18 25	45	18.4	6.4
	⌜21	GRF SimpIIIA GRF	22 25	22 30	45	2.0	1.0
	⌞ 1	S Simple I	22 50	22 51	5	2.6	1.3*
14	⌜21	GRF SimpIIIA GRF	00 20	00 30	75	5.8	2.9*
	⌞ 4	S/F Simple IIF	00 23	00 24.2	4	15.0	5.0*
	20	GRF SimpIII GRF	12 45	13 10	65	4.2	2.1**
	⌜28	PRE Precursor	16 23	16 34	16	5.2	---
	+ 4	S/F Simple IIF	16 39	16 42	6	294.0	73.0
	⌞29	PBI P.B. Increase	16 45	16 45	80	38.0	13.4
	260	FAL Fall Only	18 15	18 30	15	-3.0	-1.5
	20	GRF SimpIII GRF	19 05	19 30	140	3.0	1.8
15	20	GRF SimpIII GRF	11 15	12 00	100	2.8	1.4**
	1	S Simple I	14 49.5	14 50.9	3.2	3.2	1.6
	32	ABS Absorption	15 15	16 10	145	-5.6	-2.8
	22	GRF SimpIIIF GRF	18 05	18 20	40	6.4	2.2
16	20	GRF SimpIII GRF	00 17	00 22	45	10.4	3.4*
	⌜ 3	S Simple II	13 44	13 45	1.5	13.2	6.6**

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

August 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS		START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Aug.				H M	H M	MINUTES		
16	⌊29	PBI	P.B. Increase	13 45.5	13 45.5	38	5.4	1.5**
	⌐21	GRF	SimpIIIA GRF	15 35	15 38	110	2.8	---
	⌊20	GRF	SimpIII GRF	15 55	16 00	45	11.6	4.4
	1	S	Simple I	18 01	18 02	2	3.2	1.6
	40	F	Fluctuations	19 40.2	19 42	2.8	2.6	---**
	⌐21	GRF	SimpIIIA GRF	21 37	22 00	170	6.4	3.2
	| 1	S	Simple I	21 38.5	21 39.5	2.5	5.4	2.5
	⌊20	GRF	SimpIII GRF	22 20	22 24	13	2.8	1.4
17	20	GRF	SimpIII GRF	00 40	00 50	50	2.8	1.4*
	⌐21	GRF	SimpIIIA GRF	17 40	17 55	40	6.4	3.0
	⌊ 2	S/F	Simple IF	17 44	17 46	5.5	8.6	6.0
	⌐ 3	S	Simple II	19 04	19 05.1	4	135.0	43.0
	⌊29	PBI	P.B. Increase	19 08	19 08	80	15.8	3.6
18	⌐21	GRF	SimpIIIA GRF	15 05	15 20	55	2.0	1.0
	|45	C	Complex (-)	15 11	15 11.9	1.2	3.6	---
	⌊ 1	S	Simple I	15 13	15 13.3	1	7.4	3.5
	1	S	Simple I	19 13.8	19 14	2	6.2	2.0
	20	GRF	SimpIII GRF	20 15	20 30	80	2.2	1.1
19	1	S	Simple I	20 04	20 05.5	4	2.0	0.7*
	1	S	Simple I	22 32	22 34	5	7.4	3.7
20	⌐ 1A	S	Simple IA	15 24	15 27	10	2.0	1.0
	⌊ 1	S	Simple I	15 27.8	15 28.2	2.5	5.6	2.4
	20	GRF	SimpIII GRF	18 00	18 20	65	3.4	1.8
21	⌐21	GRF	SimpIIIA GRF	17 55	18 08	145	9.6	3.6
	⌊ 4	S/F	Simple IIF	17 56.5	17 58	9	67.0	17.0
22	20	GRF	SimpIII GRF	12 30	12 50	115	2.8	1.6**
	20	GRF	SimpIII GRF	14 50	15 45	55	1.8	0.9
23	⌐ 4	S/F	Simple IIF	23 22	23 24	8	95.0	45.0*
	⌊29	PBI	P.B. Increase	23 30	23 30	100	7.0	3.3*
24	20	GRF	SimpIII GRF	17 50	18 20	85	1.6	1.2
25	20	GRF	SimpIII GRF	13 55	14 15	125	1.8	---
	240	R	Rise Only	19 00	21 10	130	3.6	1.5
26	240	R	Rise Only	22 25	22 45	20	3.0	1.5*
27	2	S/F	Simple IF	01 06.9	01 07	1	7.8	---*
	⌐27	RF	Rise & Fall	21 10	Indet.	230	1.6	1.4
	|24	R	Rise	21 10	21 13	3	1.6	0.8

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

August 1983

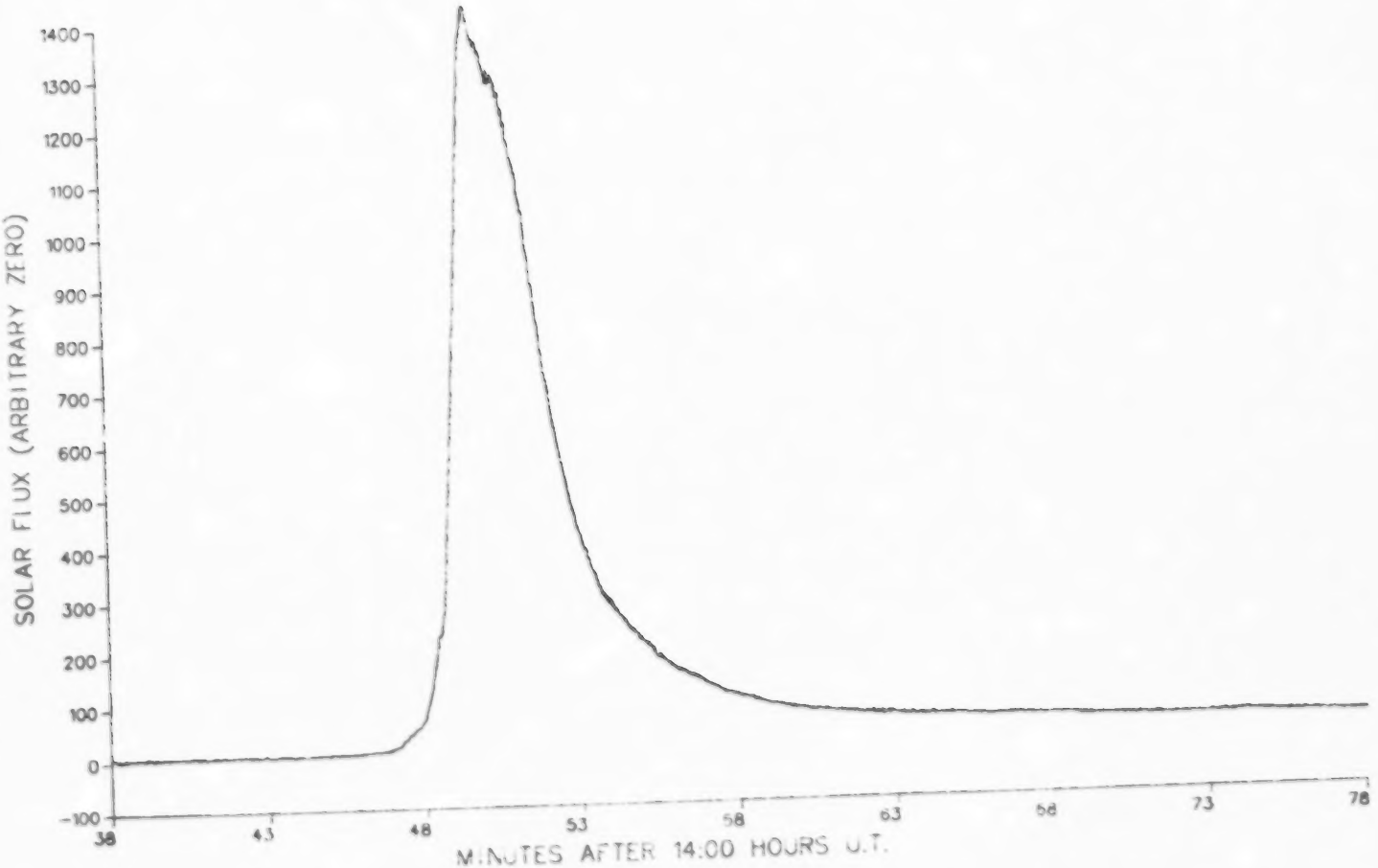
OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHz

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Aug.			H M	H M	MINUTES		
27	24P	R Post Rise	21 13	-- --	162	1.6	---
	26	FAL Fall	23 55	01 00	65	-1.6	-0.8*
29	21	GRF SimpIIIA GRF	00 50	01 20	>60	3.6	---*
	1	S Simple I	01 10.3	01 13	7	7.8	4.2*
30	24OA	R Rise Only A	19 15	20 45	90	6.6	3.3
	20	GRF SimpIII GRF	19 35	19 55	70	4.8	---
	20	GRF SimpIII GRF	22 35	23 00	175	2.0	1.4*
31	8	S Spike	21 23.6	21 23.7	0.3	4.8	---

* Only observed at DRAO, Penticton.

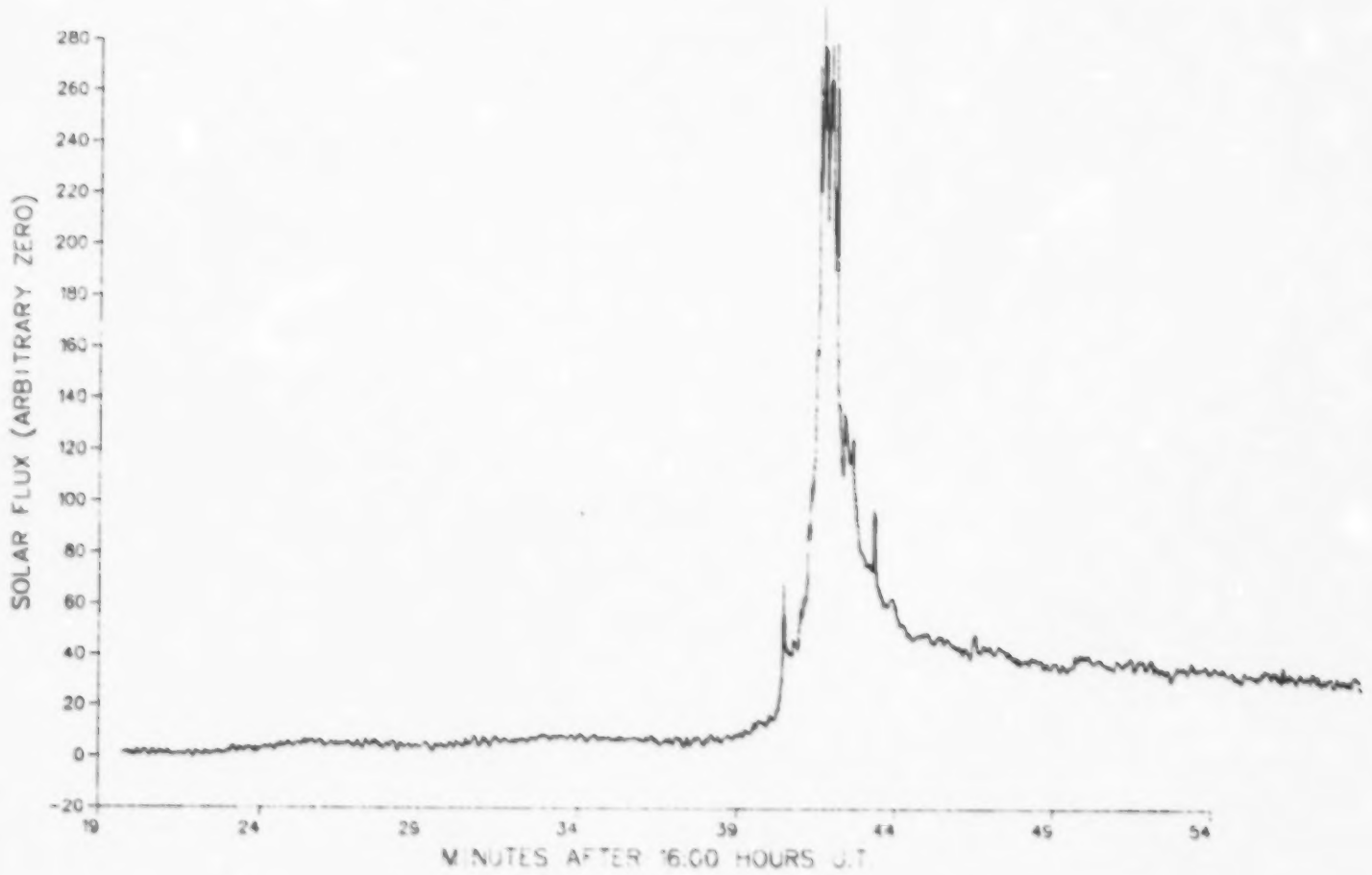
AUGUST 03, 1983

SELECTED 2800 MHz SOLAR NOISE BURST
A.R.O. OTTAWA, ONT.
CANADA



AUGUST 14, 1983

SELECTED 2800 Mhz SOLAR NOISE BURST
A.R.O. OTTAWA, ONT.
CANADA

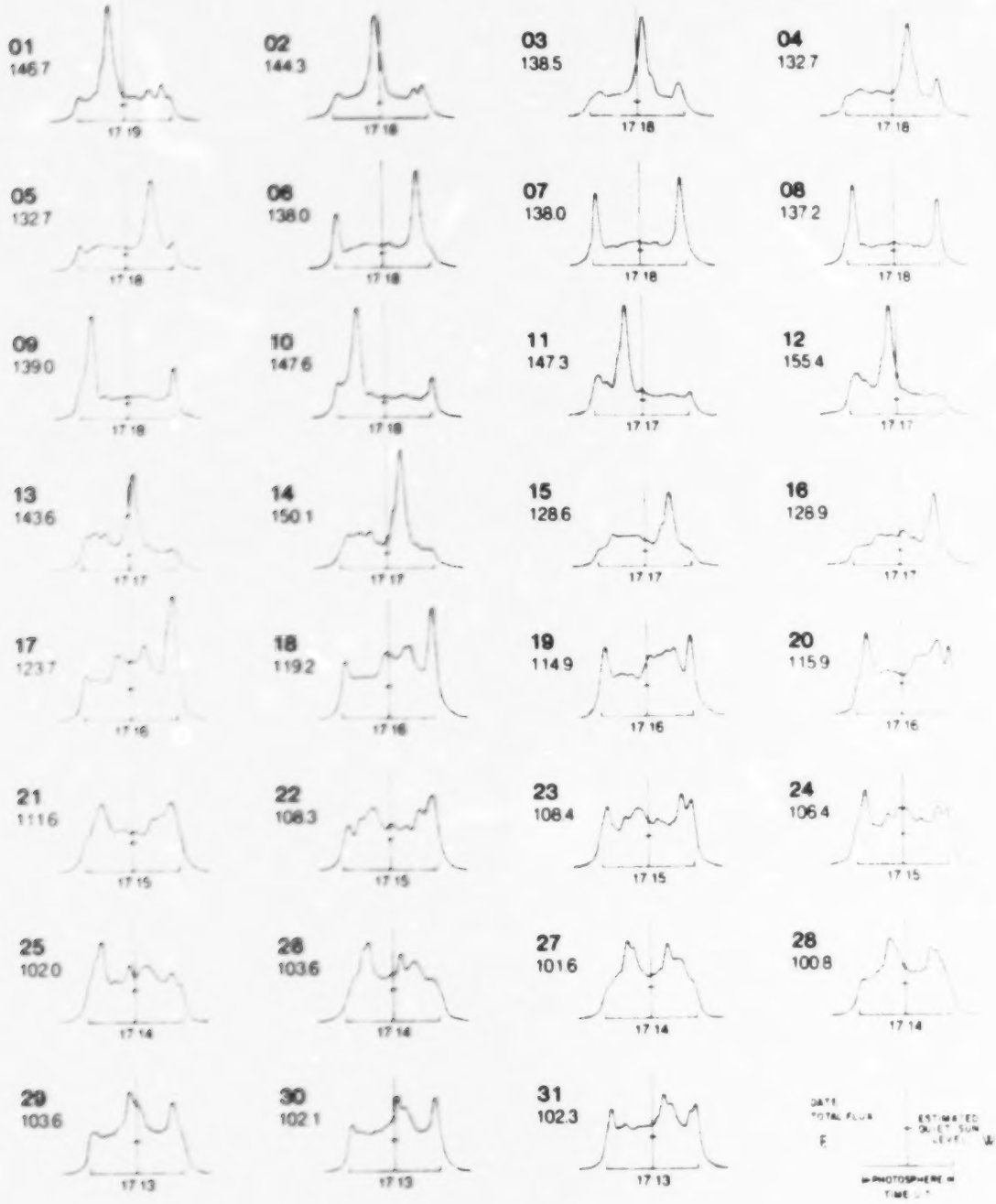


EAST-WEST SOLAR SCANS

AUGUST 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



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September 1983

HERZBERG INSTITUTE OF ASTPOPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Sep.	Series C	Series C	Series D
1	108.5#	110.5#	99.4#
2	108.9	110.9	99.8
3	104.6	106.4	95.8
4	108.7	110.5	99.4
5	115.7	117.6	105.8
6	118.8	120.7	108.6
7	116.8	118.6	106.7
8	116.7	118.5	106.6
9	113.7	115.3	103.8
10	108.2	109.7	98.7
11	109.1	110.5	99.4
12	103.6#	104.9#	94.4#
13	103.1	104.4	94.0
14	103.9	105.3	94.8
15	105.1#	106.3#	95.7#
16	105.1#	106.3#	95.7#
17	104.1	105.1	94.6
18	101.6	102.5	92.3
19	100.3	101.2	91.1
20	99.6	100.4	90.4
21	102.2	103.0	92.7
22	105.3	106.0	95.4
23	111.8	112.6	101.3
24	111.1	111.8	100.6
25	110.0#	110.5#	99.4#
26	114.0#	114.6#	103.1#
27	119.3	119.8	107.8
28	114.3	114.8	103.3
29	114.2	114.5	103.0
30	112.7#	113.0#	101.7#
Mean:	109.0	110.2	99.2

Corrected for burst.

September 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-AFO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Sep.	14:00	17:00	20:00	19:35
1	106.2	108.5#	108.7#	104.8#
2	108.0	108.9	107.3	105.1
3	104.9	104.6	105.7	-----
4	108.1#	108.7	113.6	-----
5	115.6	115.7	116.8	-----
6	117.2	118.8	118.3	115.5
7	117.2	116.8	116.4	114.2
8	115.9	116.7	116.9	113.6
9	114.3	113.7	113.2	111.8
10	109.7	108.2	107.7	-----
11	109.1	109.1	108.4	-----
12	102.8	103.6#	103.5#	103.3#
13	103.6	103.1	104.1	102.6
14	102.9	103.9	103.6	102.6
15	103.5	105.1#	106.2	103.8
16	104.0	105.1#	104.4	103.5
17	103.7	104.1	105.0	-----
18	102.0	101.6	101.4#	-----
19	100.8	100.3	100.2	98.6
20	99.9	99.6	100.4	98.5
21	100.6	102.2	103.5	100.9
22	104.9	105.3	107.4#	106.3#
23	108.8	111.8	110.9#	110.0#
24	111.5	111.1	111.6#	-----
25	110.1	110.0#	110.0#	-----a
26	113.5	114.0#	117.1	114.5
27	116.3	119.3	119.7	116.9
28	114.4	114.3	117.9	116.2
29	114.7	114.2	115.2	113.1
30	112.9#	112.7#	113.5	111.0
Mean:	108.6	109.0	109.6	107.9

Corrected for burst.
a) No observation

September 1963

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Sep.			H M	H M	MINUTES		
1	240	R	Rise Only	13 05	13 40	35	2.2	1.1**
	240	R	Rise Only	14 35	14 50	15	2.2	1.1**
	20	GRF	SimpIII GRF	16 20	Indet.	280	2.2	1.6
2	4	S/F	Simple IIF	16 04.5	16 06	5	14.2	6.0
	1	S	Simple I	16 11.5	16 13	4	3.4	1.2
	1	S	Simple I	22 52.5	22 52.8	1.5	2.4	1.1
3	20	GRF	SimpIII GRF	14 20	14 35	50	1.6	0.8**
	r21	GRF	SimpIIIA GRF	22 25	22 55	>180	5.8	---*
	L 8	S	Spike	22 32.8	22 32.9	0.2	8.0	---
4	240	R	Rise Only	17 45	19 40	115	5.6	2.4
5	20	GRF	SimpIII GRF	14 55	14 58	40	2.2	1.1
	20	GRF	SimpIII GRF	15 40	15 55	75	2.2	1.1
	4	S/F	Simple IIF	20 04.2	20 05.7	3	14.6	3.7*
6	2	S/F	Simple IF	01 13.2	01 14	1.2	6.0	2.0*
	20	GRF	SimpIII GRF	14 25	15 45	100	2.4	1.2
	20	GRF	SimpIII GRF	17 05	17 50	55	2.0	1.0
	r23	GRF	SimpIIIAF GRF	20 45	21 15	60	2.0	---
	L 1	S	Simple I	21 10	21 10.2	1.5	1.6	0.9
7	20	GRF	SimpIII GRF	E14 15	14 35	>60	3.0	---
	20	GRF	SimpIII GRF	22 30	23 00	150	2.6	1.3*
9	20	GRF	SimpIII GRF	22 45	23 15	115	3.0	1.0*
10	r27	RF	Rise F Fall	20 30	Indet.	230	4.5	2.0
	24	R	Rise	20 30	20 55	25	2.8	1.0
	240	R	Post Rise	20 55	-- --	165	2.8	---
	L26	FAL	Fall	23 40	00 20	40	-2.0	-1.4*
12	20	GRF	SimpIII GRF	16 10	17 05	345	23.0	11.5
13	20	GRF	SimpIII GRF	E14 15	14 25	>55	2.4	---**
15	-	-	Incomplete	E14 15	14 17	>105	15.4	---**
	20	GRF	SimpIII GRF	16 30	16 55	130	3.6	1.8
16	r21	GRF	SimpIIIA GRF	E14 15	14 25	>245	4.2	1.4**
	L20	GRF	SimpIII GRF	15 55	15 56	30	1.4	0.7
17	20	GRF	SimpIII GRF	17 10	17 25	50	2.2	1.1
18	26	FAL	Fall	17 25	17 50	25	-1.6	-0.5
	20	GRF	SimpIII GRF	19 15	20 40	315	4.4	3.2
20	8	S	Spike	16 15.1	16 15.3	0.5	5.6	2.9
21	240	R	Rise Only	16 10	17 10	60	2.0	1.0

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

September 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Sep.				H M	H M	MINUTES		
21	1	S	Simple I	21 39.2	21 39.6	2	4.0	1.2
22	240	R	Rise Only	17 05	18 00	55	2.0	1.0
	20	GRF	SimpIII GRF	19 15	19 40	80	2.0	1.3
23	r240A	R	Rise Only A	15 40	15 44	4	2.0	---
	L 8	S	Spike	15 42	15 42.5	0.8	24.0	---
	3	S	Simple II	18 05	18 06.5	7	11.0	3.7
	20	GRF	SimpIII GRF	19 30	20 00	130	3.6	1.8
24	20	GRF	SimpIII GRF	15 30	15 50	75	2.0	1.4
	r21	GRF	SimpIIIA GRF	18 20	18 32	170	2.8	1.2
	L 8	S	Spike	19 31	19 31.5	0.7	4.0	2.0
25	r23	GRF	SimpIIIAF GRF	16 50	19 30	255	5.4	2.4**
	L 2	S/F	Simple IF	19 22.5	19 26	7	2.4	1.2**
26	20	GRF	SimpIII GRF	12 05	12 10	65	3.4	1.7**
	20	GRF	SimpIII GRF	15 45	15 50	125	2.4	1.2
	240	R	Rise Only	18 35	18 45	70	2.6	1.3
	20	GRF	SimpIII GRF	21 08	21 10	27	1.6	0.8
27	240	R	Rise Only	15 25	16 15	50	2.6	---
28	22	GRF	SimpIIIF GRF	15 20	15 30	65	2.0	1.0
	20	GRF	SimpIII GRF	20 35	20 40	25	3.2	1.6
29	240	R	Rise Only	19 30	19 45	15	2.0	1.0**
	1	S	Simple I	20 21.1	20 21.3	3	2.6	1.3
30	20	GRF	SimpIII GRF	13 05	14 25	295	5.0	2.5**
	20	GRF	SimpIII GRF	20 40	21 00	50	2.0	1.0

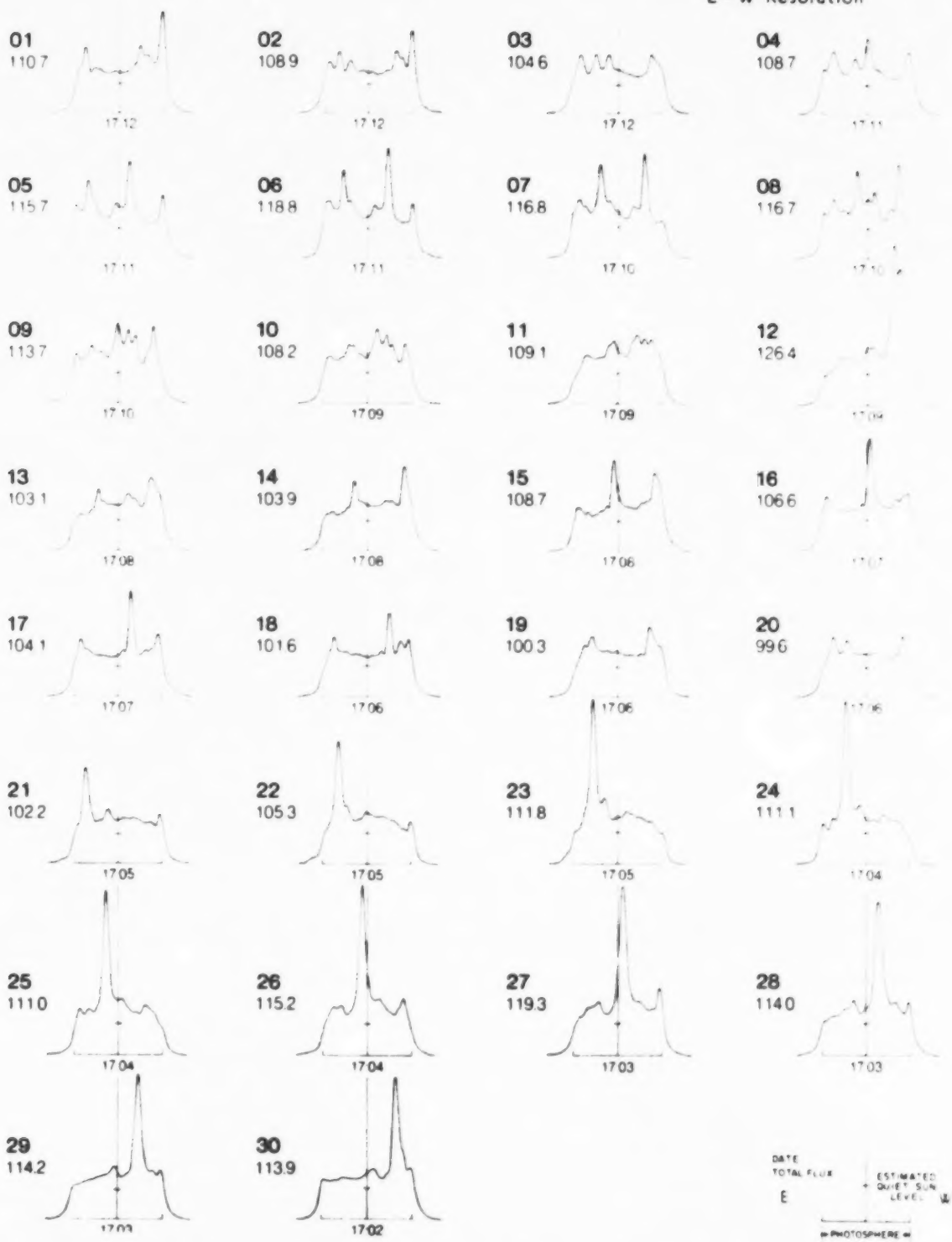
**Only observed at ARO, Lake Traverse.

EAST-WEST SOLAR SCANS

SEPTEMBER 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



October 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-APO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Oct.	Series C	Series C	Series D
1	117.3	117.5	105.8
2	120.3	120.4	108.4
3	123.0	123.1	110.8
4	125.1	125.1	112.6
5	126.6#	126.6#	113.9#
6	132.8	132.7	119.4
7	134.0	133.9	120.5
8	131.4#	131.1#	118.0#
9	130.8	130.4	117.4
10	134.0#	133.6#	120.2#
11	138.9	138.3	124.5
12	134.2	133.7	120.3
13	134.2#	133.5#	120.1#
14	132.2#	131.5#	118.3#
15	127.8	127.0	114.3
16	118.0b	117.2b	105.5b
17	111.7#	110.9#	99.8#
18	104.4	103.6	93.2
19	106.0	105.2	94.7
20	100.0	99.1	89.2
21	90.1	89.3	80.4
22	88.1	87.2	78.5
23	88.7	87.8	79.0
24	89.6	88.6	79.7
25	90.3	89.2	80.3
26	90.2	89.1	80.2
27	90.1	88.9	80.0
28	91.6	90.4	81.4
29	92.0	90.7	81.6
30	93.9	92.6	83.3
31	97.7	96.2	86.6
Mean:	112.4	111.8	100.6

Corrected for burst.
b) Extrapolated

October 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Oct.	14:00	17:00	20:00	19:35
1	116.3	117.3	119.0	-----a
2	119.7	120.3	121.4	-----
3	123.1#	123.0	123.9	120.8
4	125.4	125.1	124.5	123.8
5	126.4	126.6#	125.7	125.6
6	131.4	132.8	133.1#	132.0
7	131.7	134.0	134.7	132.9
8	134.5	131.4#	130.9	-----
9	130.5#	130.8	132.3	-----
10	134.4	134.0#	135.8	-----
11	135.7#	138.9	141.3	139.3#
12	133.2	134.2	134.2	132.9
13	135.0#	134.2#	134.3	133.4
14	131.6	132.2#	133.7#	132.9#
15	126.4#	127.8	130.3	-----
16	118.0	118.0b	118.0b	-----
17	111.7	111.7#	110.0	111.2
18	103.8	104.4	105.0	104.0
19	104.7	106.0	106.4#	103.7#
20	100.9	100.0	98.3	97.2
21	91.1	90.1	91.0	90.4
22	88.9	88.1	89.6	----
23	88.6	88.7	88.1	----
24	89.4	89.6	90.0	88.4
25	89.9	90.3	90.6	89.7
26	88.5	90.2	90.7	90.1
27	89.3	90.1	90.1	89.4
28	91.6	91.6	91.7	89.1
29	91.6	92.0	92.6	----
30	92.6	93.9	93.1	----
31	95.1	97.7	104.9	102.6
Mean:	112.0	112.4	113.1	111.5

Corrected for burst.
b) Extrapolated
a) No observation

October 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Oct.				H M	H M	MINUTES		
1	1	S	Simple I	17 47	17 50	8	1.4	0.7**
2	1	S	Simple I	17 49.5	17 49.8	1	2.2	1.1
	8	S	Spike	21 21.9	21 22	0.7	2.4	---
3	r27	RF	Rise & Fall	13 35	Indet.	195	2.0	1.8**
	|24	R	Rise	13 35	13 45	10	2.0	1.0**
	|24P	R	Post Rise	13 45	-- --	160	2.0	---**
	L26	FAL	Fall	16 25	16 50	25	-2.0	-1.0**
	20	GRF	SimpIII GRF	17 05	17 30	55	2.0	1.0
4	32	ABS	Absorption	14 40	15 55	120	-2.4	-1.2
5	40	F	Fluctuations	13 57	13 57.4	0.7	19.6	---**
	r 3	S	Simple II	14 56	15 02	16	290.0	66.6
	L29	PBI	P.B. Increase	15 12	15 12	123	17.0	5.7
	r 4	S/F	Simple IIF	17 42	17 48	10	17.8	8.6
	L29	PBI	P.B. Increase	17 52	17 52	100	7.8	3.9
6	r27A	RF	Rise & Fall A	15 25	Indet.	320	2.4	2.3
	|24	R	Rise	15 25	15 30	5	2.4	1.2
	|24P	R	Post Rise	15 30	-- --	295	2.4	---
	|20	GRF	SimpIII GRF	15 57	16 03	50	2.6	1.8
	|20	GRF	SimpIII GRF	17 03	17 35	65	2.4	1.2
	|20	GRF	SimpIII GRF	19 40	19 45	40	2.0	1.0
	L26	FAL	Fall	20 25	20 45	20	-2.4	-1.2
	20	GRF	SimpIII GRF	22 05	22 40	125	3.8	2.5*
7	240	R	Rise Only	14 20	14 29	9	2.4	1.3**
	20	GRF	SimpIII GRF	14 30	14 32	13	2.6	1.3**
	2	S/F	Simple IF	23 03	23 03.2	2	2.6	1.4*
8	20	GRF	SimpIII GRF	12 25	12 45	60	2.8	1.4**
	r 4	S/F	Simple IIF	16 58.3	16 59	1.7	17.0	7.6
	+30	PBI	P.B. Incr. A	17 00	17 00	20	2.4	1.2
	L 1	S	Simple I	17 04.3	17 04.7	1.5	6.4	1.6*
	20	GRF	SimpIII GRF	21 15	21 35	120	3.2	2.0*
9	20	GRF	SimpIII GRF	13 35	14 15	125	3.8	2.0**
10	20	GRF	SimpIII GRF	16 20	16 35	105	4.2	3.0
11	20	GRF	SimpIII GRF	12 35	14 30	190	3.6	1.8**
	240	R	Rise Only	16 20	17 15	55	5.0	2.5
	20	GRF	SimpIII GRF	17 40	18 30	130	5.8	2.9
	20	GRF	SimpIII GRF	21 30	22 15	110	3.6	1.6*

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

October 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Oct.				H M	H M	MINUTES		
12	20	GRF	SimpIII GRF	15 25	16 00	60	2.0	1.0**
	⌐ 4	S/F	Simple IIF	17 07.8	17 08.4	1.7	26.0	8.8*
	+30	PBI	P.B. Incr. A	17 09.5	17 09.5	110	4.8	2.4
	| 1	S	Simple I	17 10.5	17 12	5	9.0	4.4
	⌊20	GRF	SimpIII GRF	17 38	17 50	45	2.0	1.1
13	⌐21	GRF	SimpIIIA GRF	12 35	13 41	90	8.4	2.4**
	⌊ 1	S	Simple I	13 21	13 22	3	2.0	1.0**
	20	GRF	SimpIII GRF	16 05	16 30	175	8.6	2.8
	⌐ 4	S/F	Simple IIF	23 23	23 27.8	8	46.0	20.0*
	⌊29	PBI	P.B. Increase	23 31	23 31	>30	9.0	---*
14	20	GRF	SimpIII GRF	13 45	14 25	65	3.0	1.5**
	20	GRF	SimpIII GRF	15 45	16 15	195	14.6	4.9
	⌐21	GRF	SimpIIIA GRF	19 20	20 05	170	5.0	2.4
	⌊ 1	S	Simple I	21 13	21 14	2	1.8	0.6*
15	⌐21	GRF	SimpIIIA GRF	12 20	12 50	255	15.4	7.4**
	⌊20	GRF	SimpIII GRF	13 45	14 05	145	2.8	1.4**
	240	R	Rise Only	17 30	17 45	15	2.6	1.3
	20	GRF	SimpIII GRF	19 31.5	19 33	11	3.2	1.0
	20	GRF	SimpIII GRF	20 05	20 45	170	2.8	1.4
16	20	GRF	SimpIII GRF	16 45	17 05	45	2.2	1.0
	22	GRF	SimpIIIF GRF	19 30	20 20	100	4.8	2.4
	260	FAL	Fall Only	21 11	21 51	40	-3.2	-1.8*
	1	S	Simple I	21 58	21 58.8	2	1.4	0.5*
	1	S	Simple I	23 00	23 00.2	1	2.2	1.3*
	1	S	Simple I	23 32	23 32.5	1	4.6	2.3*
17	⌐21	GRF	SimpIIIA GRF	15 20	Indet.	190	2.4	---**
	| 1	S	Simple I	16 34	16 34.2	5	6.0	1.2
	| 1	S	Simple I	16 58	16 58.4	2	1.8	---
	⌊ 1	S	Simple I	17 18.9	17 19	1	1.8	0.8
	8	S	Spike	20 29	20 29.3	0.5	7.0	---
18	3	S	Simple II	21 05	21 06.5	5	10.4	4.0
19	240	R	Rise Only	14 26	14 31	5	2.4	1.6**
	⌐21	GRF	SimpIIIA GRF	14 44	14 50	40	2.4	1.2**
	⌊ 1	S	Simple I	14 44	14 47	7	8.0	3.0**
	⌐ 21	GRF	SimpIIIA GRF	17 50	19 05	320	6.4	---
	|⌐28	PRE	Precursor	19 59	20 00	4	3.8	1.9

* Only observed at DPAC, Penticton.
**Only observed at ARO, Lake Traverse.

October 1983

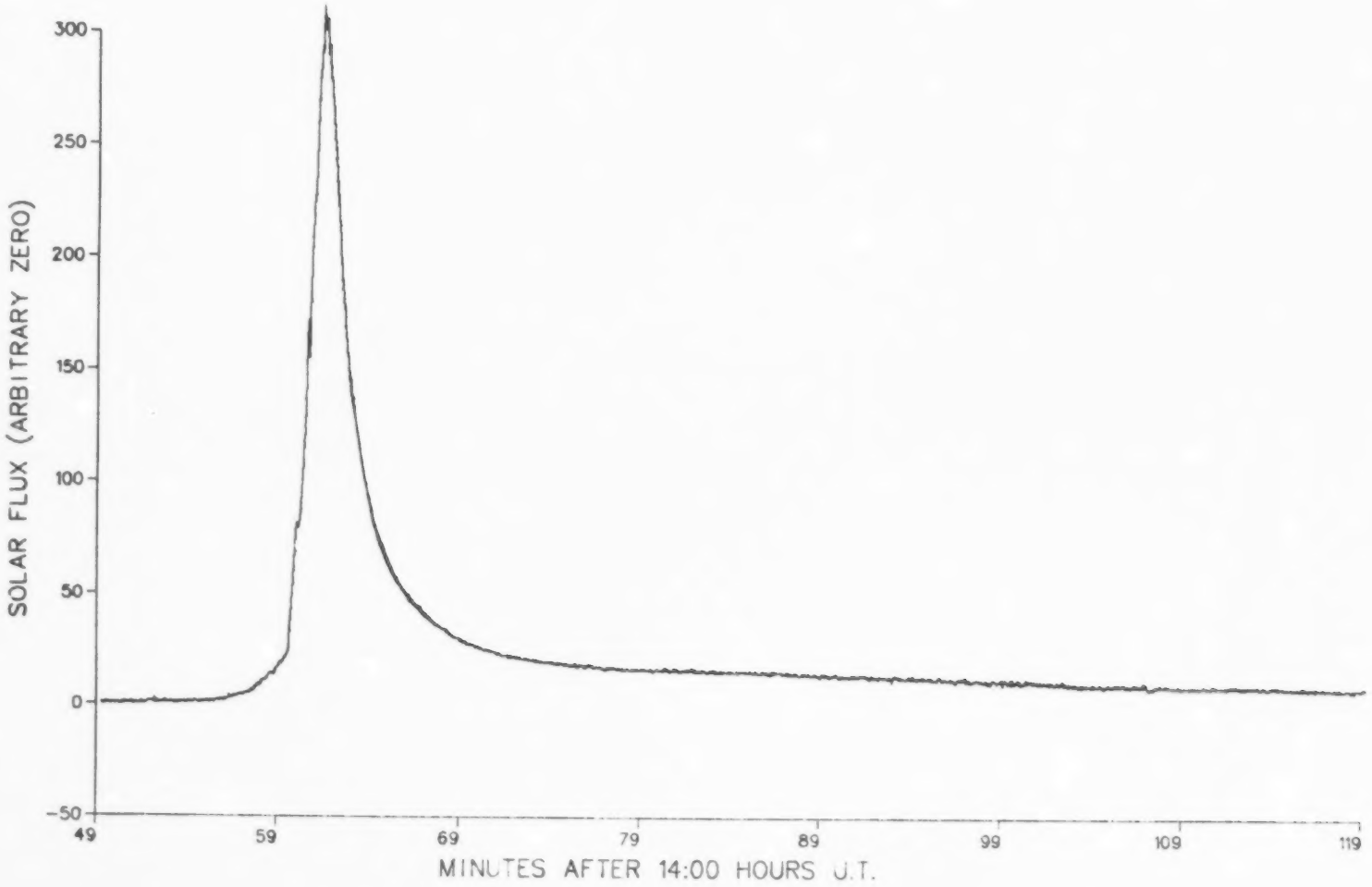
OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

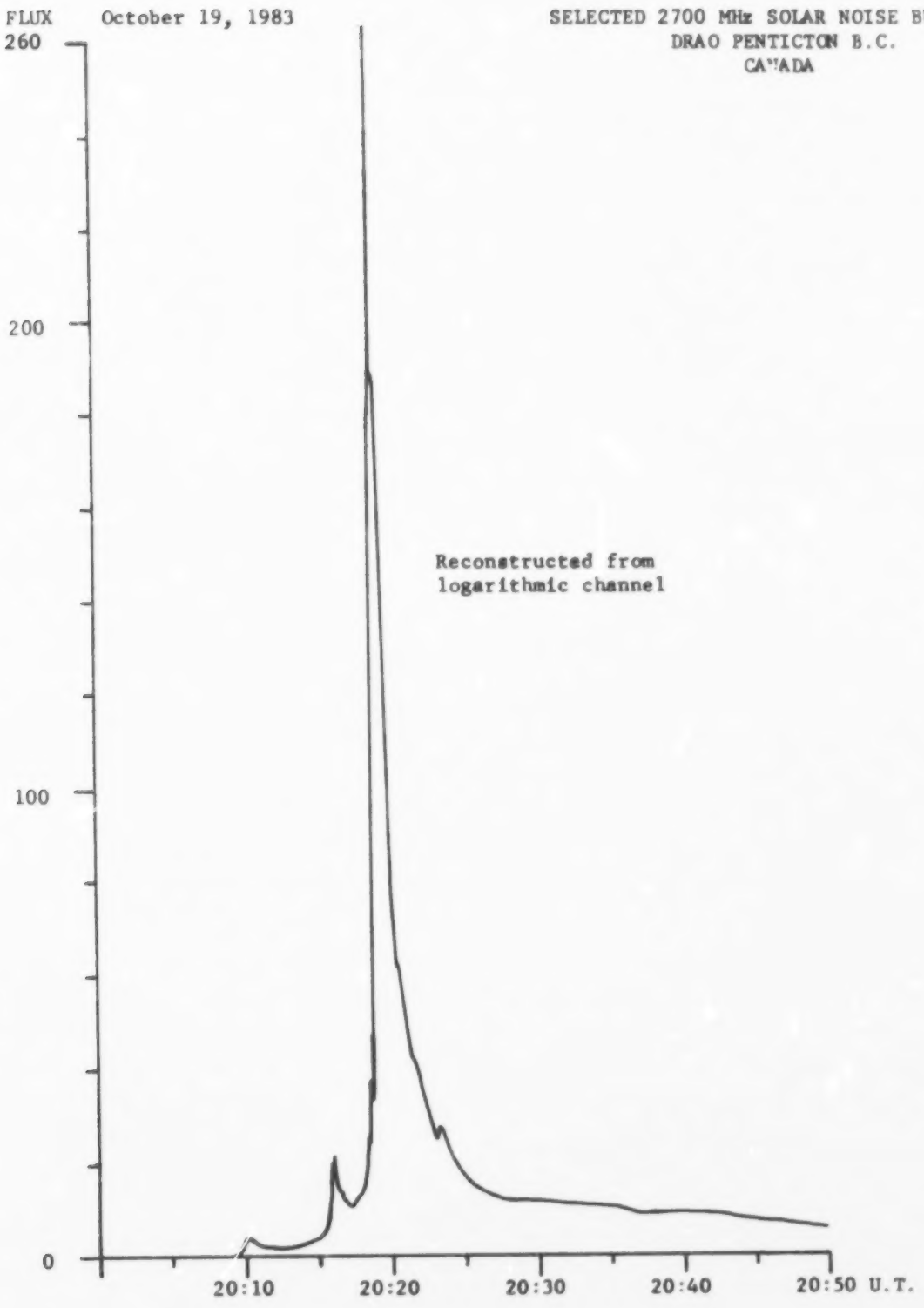
DATE	KEY	CLASS		START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Oct.				H M	H M	MINUTES		
19	|+ 4	S/F	Simple IIF	20 03	20 09.2	15	265.0	34.0*
	└└29	PBI	P.B. Increase	20 18	20 18	130	11.8	4.9
29	r 2	S/F	Simple IF	19 25.5	19 30.8	7.5	6.8	2.6
	└29	PBI	P.B. Increase	19 33	19 33	10	1.8	0.9
	20	GRF	SimpIII GRF	20 20	22 10	>160	3.0	---*
31	r 240A	R	Rise Only A	16 10	16 40	30	2.0	---
	|r 4	S/F	Simple IIF	16 13	16 16.1	6	30.0	13.0
	└└29	PBI	P.B. Increase	16 19	16 19	20	5.2	2.6
	1	S	Simple I	16 53	16 56	8	2.0	1.2
	240	R	Rise Only	17 05	17 10	5	7.2	3.6
	20	GRF	SimpIII GRF	17 50	18 20	130	6.4	3.2

* Only observed at DRAC, Penticton.

OCTOBER 05, 1983

SELECTED 2800 MHz SOLAR NOISE BURST
A.R.O. OTTAWA, ONT.
CANADA




FLUX
October 19, 1983
SELECTED 2700 MHz SOLAR NOISE BURST
DRAO PENTICTON B.C.
CANADA
260
200
100
0
Reconstructed from
logarithmic channel
20:10
20:20
20:30
20:40
20:50 U.T.

EAST-WEST SOLAR SCANS

OCTOBER 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution

November 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Nov.	Series C	Series C	Series D
1	99.8	98.3	88.5
2	99.2	97.6	87.8
3	98.5	96.9	87.2
4	104.9	103.1	92.8
5	106.9	105.1	94.6
6	-----a	----a	----a
7	110.5	108.5	97.6
8	105.5	103.5	93.1
9	101.1	99.2	89.3
10	102.9	100.8	90.7
11	98.7	96.7	87.0
12	91.5	89.6	80.6
13	93.9	91.9	82.7
14	93.0	91.0	81.9
15	92.9	90.9	81.8
16	92.6	90.6	81.5
17	87.6	85.6	77.0
18	86.4	84.4	76.0
19	84.3	82.3	74.1
20	82.3	80.3	72.3
21	81.3	79.3	71.4
22	82.2	80.1	72.1
23	80.2	78.2	70.4
24	80.9	78.8	70.9
25	81.3	79.2	71.3
26	82.5	80.4	72.4
27	86.7	84.4	76.0
28	89.0	86.6	77.9
29	91.9	89.4	80.5
30	92.6	90.0	81.0
Mean:	92.5	90.4	81.4

a) No observation

November 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Nov.	14:00	17:00	20:00	19:35
1	100.8	99.8	100.2	97.4
2	98.3	99.2	97.9	98.0
3	97.9	98.5	100.2	100.7
4	101.1	104.9	105.2#	104.6
5	106.4	106.9	106.9	-----
6	104.4	-----a	-----a	-----
7	107.6	110.5	109.1#	108.2
8	105.2	105.5	105.4#	104.8#
9	101.7	101.1	102.7	101.2
10	102.9	102.9	102.7	102.7
11	99.4b	98.7	98.4	-----
12	90.9	91.5	91.5	-----
13	92.7	93.9	93.4	-----
14	92.0	93.0	92.6	90.6
15	90.4	92.9	92.8	91.0
16	91.6	92.6	92.6b	91.8
17	88.3	87.6	88.0	86.9
18	86.6	86.4	86.0	85.5
19	84.0	84.3	84.7	----
20	82.3	82.3	83.5	----
21	81.8	81.3	82.5	80.4
22	82.0	82.2	82.4	80.1
23	80.3	80.2	80.9	78.0
24	80.7	80.9	81.4	79.3
25	80.7	81.3	82.0	79.4
26	82.2	82.5	82.7	----
27	82.1	86.7	86.9	----a
28	88.3	89.0	90.4	88.3
29	91.7	91.9	91.9	89.8
30	91.2	92.6	93.4	90.6
Mean:	92.2	92.5	92.7	91.9

Corrected for burst.
a) No observation
b) Extrapolated

November 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHz

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Nov.			H M	H M	MINUTES		
4	240	R	Rise Only	15 55	16 00	5	2.4	1.5
	20	GRF	SimpIII GRF	20 00	20 20	60	2.0	1.4
5	45	C	Complex (-)	16 09.5	16 10.2	2	28.0	9.2
	8	S	Spike	16 12.5	16 12.6	0.5	2.4	1.2
7	1	S	Simple I	18 59	19 00.1	5	3.2	1.4
	21	GRF	SimpIIIA GRF	19 53	19 58	25	3.6	1.8
	46F	C	Complex F (-)	19 58.8	20 03	7	8.0	2.6
	22	GRF	SimpIIIF GRF	20 50	21 57	100	5.6	1.8*
8	46F	C	Complex F (-)	17 27	17 31.8	26	115.0	54.4
	29	PRI	P.E. Increase	17 53	17 53	185	12.2	3.0
9	8	S	Spike	16 08.5	16 08.8	0.5	6.8	2.2
14	2	S/F	Simple IF	17 20.5	17 21	2	2.0	0.8
15	240	R	Rise Only	15 15	15 30	15	2.0	1.0**
20	32	ABS	Absorption	18 50	19 00	30	-1.0	-0.5
28	240	R	Rise Only	14 20	16 40	140	4.6	3.0**
30	46F	C	Complex F (-)	16 12.3	16 13.5	1.7	13.2	4.4**

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

EAST-WEST SOLAR SCANS

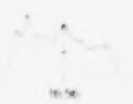
NOVEMBER 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution

01
1020

02
992



03
985

04
1049

NO DATA

05
1069

NO DATA

06

NO DATA

07
1105

NO DATA

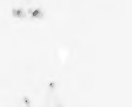
08
1055

09
1011

10
1029

11
987

12
915



13
939

14
930

15
930

16
926

17
876

18
864

19
843

20
823

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813

22
822

23
802

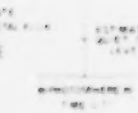
24
809

25
813

26
825

27
867

28
890



29
919

30
926

December 1983

HERZBERG INSTITUTE OF ASTROPHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO
CANADA

SERIES C & D

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO) AT 17:00 U.T.

Series D is the best estimate of absolute value and is obtained by using the multiplier .90 recommended by Commission V of URSI

1983	Observed	Adj. to 1 AU	
Dec.	Series C	Series C	Series D
1	93.1	90.5	81.4
2	91.5	88.9	80.0
3	91.1	88.5	79.6
4	94.6	91.9	82.7
5	94.7	92.0	82.8
6	100.0#	97.1#	87.4#
7	101.6	98.6	88.7
8	101.3	98.3	88.5
9	111.5	108.2	97.4
10	111.3	108.0	97.2
11	105.0#	101.7#	91.5#
12	104.3	101.1	91.0
13	104.0	100.8	90.7
14	99.6	96.5	86.8
15	95.1	92.2	83.0
16	96.6#	93.5#	84.1#
17	95.0	92.0	82.8
18	93.1	90.1	81.1
19	89.1	86.2	77.6
20	86.4	83.6	75.2
21	85.0	82.3	74.1
22	85.6	82.9	74.6
23	85.8	83.0	74.7
24	85.9	83.1	74.8
25	85.2#	82.4#	74.2#
26	85.7	82.9	74.6
27	86.3	83.5	75.1
28	83.5	80.7	72.6
29	83.9	81.1	73.0
30	84.1	81.3	73.2
31	86.7	83.8	75.4
Mean:	93.4	90.5	81.5

Corrected for burst.

December 1983

SERIES C

DAILY VALUES OF SOLAR FLUX AT 2800 MHZ (OTTAWA-ARO)

AND AT 2700 MHZ (PENTICTON-DRAO)

OBSERVED VALUES

1983	OTTAWA - ARO			PENTICTON - DRAO
Dec.	14:00	17:00	20:00	19:35
1	92.6	93.1	93.9	91.3
2	90.9	91.5	91.5	90.3
3	90.0	91.1	93.2	----
4	92.8	94.6	94.5	----
5	95.3	94.7	95.5	93.6
6	97.4#	100.0#	100.0#	100.7#
7	99.8	101.6	103.9	103.3
8	101.0#	101.3	105.1	103.9
9	108.4	111.5	111.7	112.1
10	110.9	111.3	111.6	-----a
11	104.8#	105.0#	105.7	-----a
12	104.9	104.3	104.3#	104.3#
13	102.3	104.0	104.9	104.0
14	98.8	99.6	99.2	98.7
15	95.2	95.1	96.0	95.5
16	94.9	96.6#	95.4	93.3
17	93.3	95.0	97.2	----
18	93.5	93.1	93.1	----
19	88.5	89.1	89.2	88.9
20	86.4b	86.4	87.1	85.7
21	84.8b	85.0	85.9	84.6
22	84.8	85.6	86.5	84.6
23	85.4	85.8	86.8	84.9
24	85.4	85.9	86.3	----
25	83.7	85.2#	85.9	----
26	85.1	85.7	84.3	----
27	84.7	86.3	88.1	----
28	82.6	83.5	83.8	81.9
29	83.0	83.9	85.6	84.1
30	81.9	84.1	86.4	84.7
31	85.8	86.7	88.2	----
Mean:	92.5	93.4	94.2	93.4

Corrected for burst.
b) Extrapolated
a) No observation

December 1963

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY	CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Dec.			H M	H M	MINUTES		
5	32	ABS	Absorption	15 55	16 15	35	-2.0	-1.0**
6	20	GRF	SimpIII GRF	13 35	Indet.	65	2.6	---**
	240A	R	Rise Only A	15 25	15 50	25	3.0	1.5**
	2	S/F	Simple IF	15 43	15 45.4	5	4.4	1.1**
	20	GRF	SimpIII GRF	16 05	16 30	60	4.8	2.6**
	22	GRF	SimpIIIF GRF	17 35	18 35	110	2.8	1.3
	27	RF	Rise & Fall	19 30	Indet.	100	1.6	1.4
	24	R	Rise	19 30	19 40	10	1.6	0.8
	24P	P	Post Rise	19 40	-- --	80	1.6	---
	26	FAL	Fall	21 00	21 10	10	-1.6	-0.8
7	20	GRF	SimpIII GRF	18 05	18 40	95	2.0	1.3
8	20	GRF	SimpIII GRF	13 50	14 30	115	2.0	1.4**
	1	S	Simple I	18 42.5	18 44.3	2.5	3.6	1.2
9	240	R	Rise Only	15 05	16 00	55	2.0	1.0**
10	1	S	Simple I	18 31	18 31.5	1.2	2.4	1.1**
11	27	RF	Rise & Fall	13 40	Indet.	190	2.2	2.0**
	24	R	Rise	13 40	13 50	10	2.2	1.1**
	24P	P	Post Rise	13 50	-- --	165	2.2	---**
	26	FAL	Fall	16 35	16 50	15	-2.2	-1.1**
	20	GRF	SimpIII GRF	16 55	18 30	170	3.4	2.3**
12	21	GRF	SimpIIIA GRF	19 23	20 30	115	1.8	1.0
	1	S	Simple I	19 24	19 25.5	3	1.6	0.7
15	20	GRF	SimpIII GRF	15 00	Indet.	80	1.0	0.7**
	20	GRF	SimpIII GRF	17 00	17 50	110	1.3	1.2**
16	8	S	Spike	13 42	13 42.2	0.7	4.0	1.8**
	21	GRF	SimpIIIA GRF	15 05	15 45	150	4.6	1.6**
	140	F	Fluctuations	15 40.8	15 41	1.5	4.8	---**
	2	S/F	Simple IF	15 43	15 44.5	2.5	5.4	2.6**
	3	S	Simple II	15 49.5	15 50	2.5	10.2	2.6**
	1	S	Simple I	15 58	15 58.6	1	2.0	0.7**
	2	S/F	Simple IF	17 55.5	17 56	2.5	2.0	1.0
	1	S	Simple I	17 59	17 59.1	1	2.4	1.0
17	2	S/F	Simple IF	15 59.2	16 01.3	6	7.4	3.0**
	45	C	Complex (-)	18 42.6	18 43	3	6.0	1.8
	1	S	Simple I	18 47	18 48.3	7	1.8	0.6
	2	S/F	Simple IF	20 33.8	20 34.3	2.5	5.8	2.0

**Only observed at ARO, Lake Traverse.

December 1983

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 AND 2800 MHZ

DATE	KEY		CLASS	START U.T.	MAXIMUM U.T.	DURATION	PEAK FLUX	MEAN FLUX
Dec.				H M	H M	MINUTES		
17	8	S	Spike	21 32.1	21 32.4	0.6	2.0	1.0*
	4	S/F	Simple IIF	22 42.9	22 43.5	2	18.0	7.5*
18	40	F	Fluctuations	16 18.5	16 20.2	3.5	13.2	---**
19	22	GRF	SimpIIIF GRF	14 20	15 50	170	2.8	1.4**
	20	GRF	SimpIII GRF	17 30	18 45	110	1.8	1.0**
25	20	GRF	SimpIII GRF	14 30	16 35	260	1.8	0.9**
30	240	F	Rise Only	15 45	16 15	30	1.8	0.9**

* Only observed at DRAO, Penticton.
**Only observed at ARO, Lake Traverse.

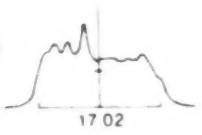
EAST-WEST SOLAR SCANS

DECEMBER 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution

01 93.1

02 91.5


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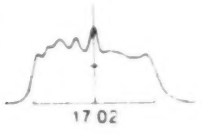

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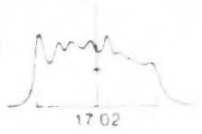

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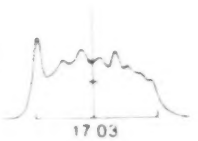

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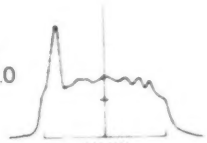

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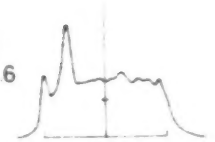

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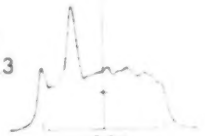

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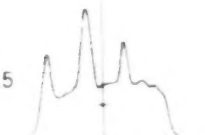

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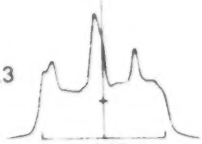

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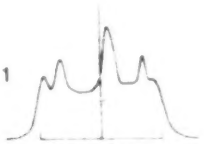

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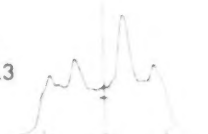

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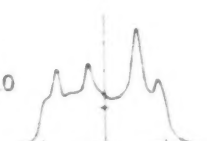

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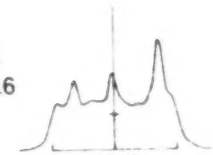

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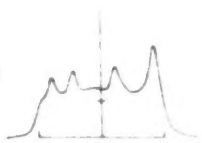

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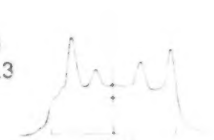

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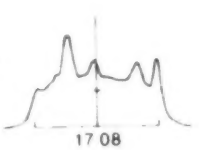

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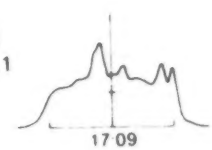

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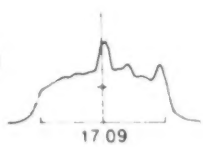

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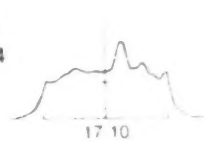

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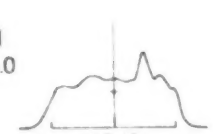

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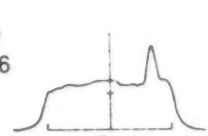

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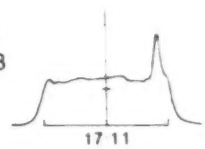

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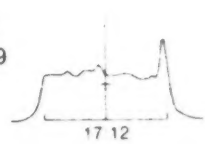

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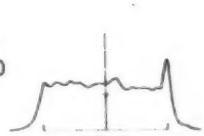
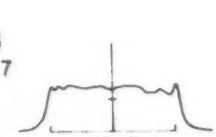
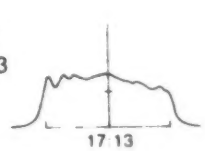
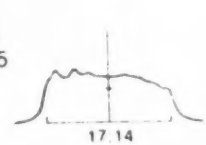
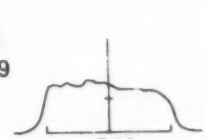


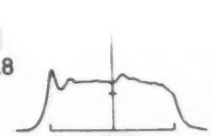
26 85.7


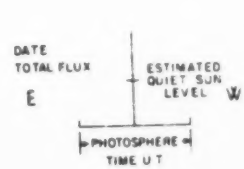
27 86.3


28 83.5


29 83.9


30 84.1

31 86.8




OTTAWA
2800 MHZ 17 U.T. OBSERVED SERIES C OTTAWA 2800 MHZ

1983 1983

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	135.9	167.5	148.1	100.8	139.8	127.6	120.0#	146.7	108.5#	117.3	99.8	93.1	1
2	135.9	161.2#	141.1	101.3	143.1	135.1#	121.3	141.2#	108.9	120.3	99.2	91.5	2
3	140.8	149.8	143.4	101.4#	137.1	135.4	127.2	135.3#	104.6	123.0	98.5	91.1	3
4	142.9	161.3	146.0	100.7	130.7	145.0	132.7	132.7	108.7	125.1	104.9	94.6	4
5	159.9	158.7#	149.0	98.6	128.5	163.0#	127.8	132.7	115.7	126.6#	106.9	94.7	5
6	167.1#	156.7	141.4	99.3	123.6#	185.8	128.0	138.0	118.8	132.8	-----A	100.0#	6
7	168.9	146.1	134.3	102.0	115.2	174.3	128.3	138.0	116.8	134.0	110.5	101.6	7
8	161.2#	137.0	129.9	103.8#	124.6	168.6	123.7	137.2	116.7	131.4#	105.5	101.3	8
9	155.1	125.3	123.7	105.8	129.7#	154.7#	119.1	139.0	113.7	130.8	101.1	111.5	9
10	149.1	116.4	116.6	102.9	140.7#	146.0#	119.1	147.6	108.2	134.0#	102.9	111.3	10
11	144.1	109.8	104.4	103.9	156.2#	135.0	121.6	147.3	109.1	138.9	98.7	105.0#	11
12	140.3	102.5	100.7#	107.2	157.1#	130.5	120.7	152.6#	103.6#	134.2	91.5	104.3	12
13	139.7	97.9	97.0	108.4	151.2	124.3	119.6	143.6	103.1	134.2#	93.9	104.0	13
14	141.9	94.1	97.0	111.0	150.2#	122.5#	120.4	138.0#	103.9	132.2#	93.0	99.6	14
15	145.8	90.8	101.7#	102.9	142.6	124.7	120.6	132.4#	105.1#	127.8	92.9	95.1	15
16	144.8	91.9	108.9	104.4	131.0#	124.8#	117.4	128.9	105.1#	118.0B	92.6	96.6#	16
17	142.6	94.2	115.7	112.6	128.7#	126.6	116.2	123.7	104.1	111.7#	87.6	95.0	17
18	139.3	99.5	118.8	119.6	134.4	126.3	112.7#	119.2	101.6	104.4	86.4	93.1	18
19	131.6	96.8	119.3	123.9	143.4	129.5	115.7	114.9	100.3	106.0	84.3	89.1	19
20	124.5	99.5	121.7	126.1	148.2#	132.5	121.1	115.9	99.6	100.0	82.3	86.4	20
21	119.9	103.9	119.6#	132.0	146.1	139.4	124.1#	111.6	102.2	90.1	81.3	85.0	21
22	117.1	108.6	118.0	138.2	148.3	144.1	134.6	108.3	105.3	88.1	82.2	85.6	22
23	119.1	114.4	116.9	138.9	140.1	145.0	128.8#	108.4	111.8	88.7	80.2	85.8	23
24	117.7	116.8	117.8	141.0	136.9	137.2#	132.1#	106.4	111.1	89.6	80.9	85.9	24
25	126.6	122.8	114.8#	143.9	135.3	136.9	132.5#	102.0	110.0#	90.3	81.3	85.2#	25
26	136.8	128.8	115.2#	144.9	128.8	139.4B	124.9#	103.6	114.0#	90.2	82.5	85.7	26
27	137.7	141.0	110.0	147.5	127.1	132.6	119.4	101.6	119.3	90.1	86.7	86.3	27
28	144.9	140.3	105.2	154.2#	129.6	125.1#	123.3	100.8	114.3	91.6	89.0	83.5	28
29	153.5		99.2	146.2	135.2	124.7	134.3#	103.6	114.2	92.0	91.9	83.9	29
30	159.6		100.9	145.0	131.7#	122.6	140.0	102.1	112.7#	93.9	92.6	84.1	30
31	166.7		98.9		134.2#		148.6#	102.3		97.7		86.7	31
MEAN	142.3	122.6	118.6	118.9	137.1	138.6	125.0	124.4	109.0	112.4	92.5	93.4	

ANNUAL MEAN 119.6

OTTAWA
2800 MHZ

17 U.T.

ADJUSTED TO 1 A.U.

SERIES C

OTTAWA
2800 MHZ

1983

1983

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	131.4	162.6	145.4	100.7	142.0	131.3	124.1#	151.1	110.5#	117.5	98.3	90.5	1
2	131.4	156.5#	138.7	101.2	145.4	139.0#	125.4	145.4#	110.9	120.4	97.6	88.9	2
3	136.2	145.5	141.0	101.4#	139.4	139.3	131.5	139.4#	106.4	123.1	96.9	88.5	3
4	138.2	156.8	143.7	100.8	132.9	149.2	137.2	136.5	110.5	125.1	103.1	91.9	4
5	154.6	154.3#	146.6	98.7	130.8	167.9#	132.1	136.5	117.6	126.6#	105.1	92.0	5
6	161.6#	152.3	139.3	99.5	125.8#	191.4	132.4	142.0	120.7	132.7	----A	97.1#	6
7	163.3	142.2	132.3	102.2	117.4	179.5	132.7	141.9	118.6	133.9	108.5	98.6	7
8	155.9#	133.3	128.1	104.1#	127.0	173.7	127.9	141.0	118.5	131.1#	103.5	98.3	8
9	150.0	121.9	122.0	106.1	132.2#	159.5#	123.1	142.9	115.3	130.4	99.2	108.2	9
10	144.2	113.4	115.1	103.3	143.5#	150.5#	123.1	151.6	109.7	133.6#	100.8	108.0	10
11	139.3	106.9	103.0	104.4	159.3#	139.2	125.7	151.3	110.5	138.3	96.7	101.7#	11
12	135.7	99.8	99.5#	107.7	160.4#	134.5	124.7	156.7#	104.9#	133.7	89.6	101.1	12
13	135.1	95.5	95.8	109.1	154.4	128.3	123.5	147.3	104.4	133.5#	91.9	100.8	13
14	137.2	91.7	95.9	111.7	153.5#	126.4#	124.4	141.6#	105.3	131.5#	91.0	96.5	14
15	141.0	88.5	100.6#	103.6	145.7	128.7	124.6	135.8#	106.3#	127.0	90.9	92.2	15
16	140.2	89.7	107.8	105.1	134.0#	128.8#	121.3	132.1	106.3#	117.2B	90.6	93.5#	16
17	138.0	91.9	114.5	113.5	131.7#	130.7	120.0	126.8	105.1	110.9#	85.6	92.0	17
18	134.8	97.2	117.7	120.7	137.6	130.5	116.4#	122.2	102.5	103.6	84.4	90.1	18
19	127.4	94.6	118.3	125.0	146.8	133.8	119.5	117.7	101.2	105.2	82.3	86.2	19
20	120.5	97.3	120.7	127.4	151.8#	136.9	125.1	118.7	100.4	99.1	80.3	83.6	20
21	116.1	101.6	118.8#	133.3	149.8	144.0	128.1#	114.2	103.0	89.3	79.3	82.3	21
22	113.5	106.2	117.2	139.7	152.0	148.9	138.9	110.8	106.0	87.2	80.1	82.9	22
23	115.4	112.0	116.2	140.4	143.7	149.8	132.9#	110.8	112.6	87.8	78.2	83.0	23
24	114.1	114.3	117.1	142.7	140.5	141.7#	136.3#	108.7	111.8	88.6	78.8	83.1	24
25	122.7	120.3	114.2#	145.6	138.8	141.4	136.7#	104.2	110.5#	89.2	79.2	82.4#	25
26	132.6	126.2	114.7#	146.8	132.3	144.1B	128.9#	105.8	114.6#	89.1	80.4	82.9	26
27	133.6	138.3	109.6	149.6	130.5	137.1	123.1	103.7	119.8	88.9	84.4	83.5	27
28	140.6	137.6	104.9	156.4#	133.1	129.4#	127.1	102.8	114.8	90.4	86.6	80.7	28
29	148.9		98.9	148.4	139.0	128.9	138.5#	105.7	114.5	90.7	89.4	81.1	29
30	154.8		100.7	147.2	135.4#	126.8	144.3	104.0	113.0#	92.6	90.0	81.3	30
31	161.9		98.7		138.0#		153.1#	104.2		96.2		83.8	31
MEAN	137.7	119.6	117.3	119.9	140.2	143.0	129.1	127.5	110.2	111.8	90.4	90.5	

ANNUAL MEAN 119.8

OTTAWA
2800 MHZ

17 U.T.

ADJUSTED TO 1 A.U.

SERIES D

OTTAWA
2800 MHZ

1983

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	118.3	146.3	130.9	90.6	127.8	118.2	111.7#	136.0	99.4#	105.8	88.5	81.4	1
2	118.3	140.8#	124.8	91.1	130.9	125.1#	112.9	130.9#	99.8	108.4	87.8	80.0	2
3	122.6	130.9	126.9	91.3#	125.5	125.4	118.3	125.5#	95.8	110.8	87.2	79.6	3
4	124.4	141.1	129.3	90.7	119.6	134.3	123.5	122.8	99.4	112.6	92.8	82.7	4
5	139.1	138.9#	131.9	88.8	117.7	151.1#	118.9	122.8	105.8	113.9#	94.6	82.8	5
6	145.4#	137.1	125.4	89.5	113.2#	172.3	119.2	127.8	108.6	119.4	----A	87.4#	6
7	147.0	128.0	119.1	92.0	105.7	161.5	119.4	127.7	106.7	120.5	97.6	88.7	7
8	140.3#	120.0	115.3	93.7#	114.3	156.3	115.1	126.9	106.6	118.0#	93.1	88.5	8
9	135.0	109.7	109.8	95.5	119.0#	143.5#	110.8	128.6	103.8	117.4	89.3	97.4	9
10	129.8	102.1	103.6	93.0	129.1#	135.4#	110.8	136.4	98.7	120.2#	90.7	97.2	10
11	125.4	96.2	92.7	94.0	143.4#	125.3	113.1	136.2	99.4	124.5	87.0	91.5#	11
12	122.1	89.8	89.5#	96.9	144.4#	121.0	112.2	141.0#	94.4#	120.3	80.6	91.0	12
13	121.6	85.9	86.2	98.2	139.0	115.5	111.1	132.6	94.0	120.1#	82.7	90.7	13
14	123.5	82.5	86.3	100.5	138.1#	113.8#	112.0	127.4#	94.8	118.3#	81.9	86.8	14
15	126.9	79.6	90.5#	93.2	131.1	115.8	112.1	122.2#	95.7#	114.3	81.8	83.0	15
16	126.2	80.7	97.0	94.6	120.6#	115.3#	109.2	118.9	95.7#	105.5B	81.5	84.1#	16
17	124.2	82.7	103.0	102.1	118.5#	117.6	108.0	114.1	94.6	99.8#	77.0	82.8	17
18	121.3	87.5	105.9	108.6	123.8	117.4	104.8#	110.0	92.3	93.2	76.0	81.1	18
19	114.7	85.1	106.5	112.5	132.1	120.4	107.5	105.9	91.1	94.7	74.1	77.6	19
20	108.4	87.6	108.6	114.7	136.6#	123.2	112.6	106.8	90.4	89.2	72.3	75.2	20
21	104.5	91.4	106.9#	120.0	134.8	129.6	115.3#	102.8	92.7	80.4	71.4	74.1	21
22	102.1	95.6	105.5	125.7	136.8	134.0	125.0	99.7	95.4	78.5	72.1	74.6	22
23	103.9	100.8	104.6	126.4	129.3	134.8	119.6#	99.7	101.3	79.0	70.4	74.7	23
24	102.7	102.9	105.4	128.4	126.4	127.5#	122.7#	97.8	100.6	79.7	70.9	74.8	24
25	110.4	108.3	102.8#	131.0	124.9	127.3	123.0#	93.8	99.4#	80.3	71.3	74.2#	25
26	119.3	113.6	103.2#	132.1	119.1	129.7B	116.0#	95.2	103.1#	80.2	72.4	74.6	26
27	120.2	124.5	98.6	134.6	117.4	123.4	110.8	93.3	107.8	80.0	76.0	75.1	27
28	126.5	123.8	94.4	140.8#	119.8	116.5#	114.4	92.5	103.3	81.4	77.9	72.6	28
29	134.0		89.0	133.6	125.1	116.0	124.6#	95.1	103.0	81.6	80.5	73.0	29
30	139.3		90.6	132.5	121.9#	114.1	129.9	93.6	101.7#	83.3	81.0	73.2	30
31	145.7		88.8		124.2#		137.8#	93.8		86.6		75.4	31
MEAN	124.0	107.6	105.6	107.9	126.1	128.7	116.2	114.8	99.2	100.6	81.4	81.5	

ANNUAL MEAN 107.8

PENTICTON
2700 MHZ 20 U.T. OBSERVED SERIES C PENTICTON 2700 MHZ

1983 1983

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	-----	168.2#	145.9	-----	-----	128.6	-----	-----	104.8#	-----A	97.4	91.3	1
2	-----	159.5	140.6	-----	147.6	133.3#	-----	138.8#	105.1	-----	98.0	90.3	2
3	-----	156.6	143.6	-----	135.4	131.7#	-----	133.3#	-----	120.8	100.7	----	3
4	146.5	163.1	146.8#	-----	132.3	-----	131.3#	131.0#	-----	123.8	104.6	----	4
5	160.9	-----	-----	100.0	133.5	-----	131.8	130.7	-----	125.6	-----	93.6	5
6	164.6	-----	-----	99.2	123.1	180.3#	124.2	-----	115.5	132.0	-----	100.7#	6
7	166.5	145.5	132.8	101.5	-----	173.7#	127.4	-----	114.2	132.9	108.2	103.3	7
8	-----	133.8	129.9#	103.8	-----	164.2#	118.8	-----	113.6	-----	104.8#	103.9	8
9	-----	125.2	123.3	-----	130.7	153.0#	-----	138.1	111.8	-----	101.2	112.1	9
10	150.2	115.2	117.4	-----	141.7#	141.3	-----	143.6	-----	-----	102.7	-----A	10
11	143.0	107.7	103.9	103.4	156.4#	-----	118.8#	149.9	-----	139.3#	-----	-----A	11
12	143.2#	-----	-----	108.0	157.2	-----	118.2#	149.7#	103.3#	132.9	-----	104.3#	12
13	143.5#	-----	-----	106.7	151.4	124.1	118.0#	-----	102.6	133.4	-----	104.0	13
14	143.2	91.8	96.1#	108.3	-----	122.5#	117.4	-----	102.6	132.9#	90.6	96.7	14
15	-----	89.5	101.4#	102.9	-----	125.1	118.0	129.6	103.8	-----	91.0	95.5	15
16	-----	91.5	107.5	-----	129.1#	124.4	-----	127.9	103.5	-----	91.8	93.3	16
17	142.9	93.1	117.2	-----	127.2	124.7#	-----	122.7#	-----	111.2	86.9	----	17
18	139.6	99.1	117.7#	123.3	134.1#	-----	112.4	118.6	-----	104.0	85.5	----	18
19	132.6	-----	-----	124.4	142.1	-----	112.6#	114.0	98.6	103.7#	----	88.9	19
20	124.9	-----	-----	126.4#	149.0	132.3	119.6	-----	98.5	97.2	----	85.7	20
21	118.5	102.9	119.6	132.4	-----	141.4	123.8#	-----	100.9	90.4	80.4	84.6	21
22	-----	-----	120.6	139.3	-----	143.9	132.8#	107.7	106.3#	----	80.1	84.6	22
23	-----	112.5	116.6#	-----	-----	144.2	-----	105.9	110.0#	----	78.0	84.9	23
24	116.9	116.3#	118.6	-----	136.6	136.7	-----	104.9	-----	88.4	79.3	----	24
25	128.3	123.8	114.4#	148.7	136.2	-----C	130.8	101.4	-----A	89.7	79.4	----	25
26	136.8	-----	-----	144.3	128.2	-----C	123.2#	100.9	114.5	90.1	----	----	26
27	137.6#	-----	-----	146.0	128.8	130.3#	119.8	-----	116.9	89.4	----A	----	27
28	145.5	144.7	102.5	152.5#	-----	125.8	123.6#	-----	116.2	89.1	88.3	81.9	28
29	-----		98.6	145.9	-----	126.2	133.4	100.9	113.1	----	89.8	84.1	29
30	-----		100.5	-----	131.9	120.6#	-----	100.1	111.0	----	90.6	84.7	30
31	164.6#		97.5		132.6#		-----	101.3		102.6		----	31
MEAN	142.5	123.2	118.0	121.9	137.4	137.6	122.8	121.5	107.9	111.5	91.9	93.4	

ANNUAL MEAN 119.1

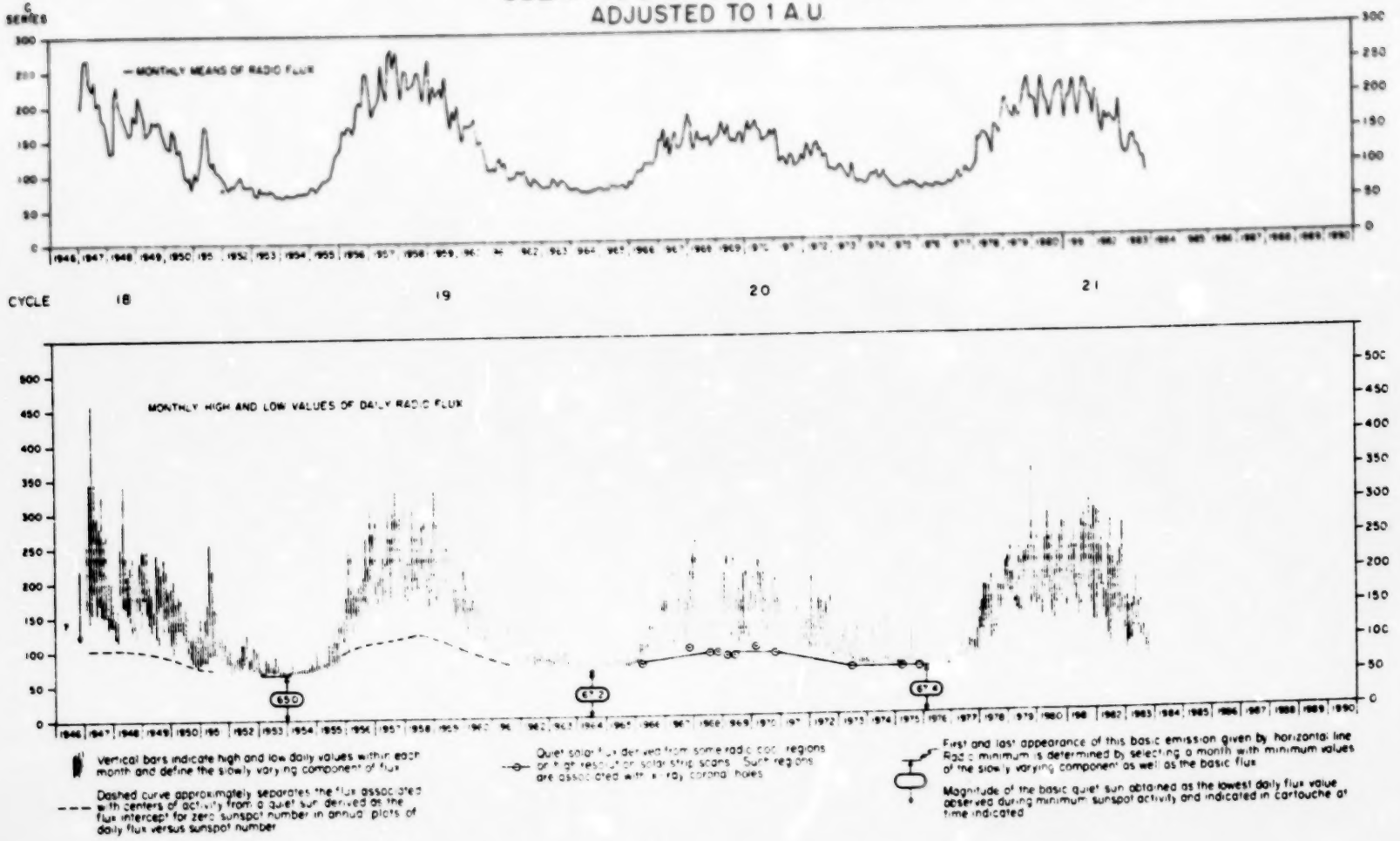
PENTICTON
2700 MHZ 20 U.T. ADJUSTED TO 1 A.U. SERIES C PENTICTON 2700 MHZ

1983 1983

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	----	163.3#	143.3	----	----	132.3	----	----	106.7#	----A	95.9	88.7	1
2	----	154.9	138.2	----	150.0	137.2#	----	143.0#	107.0	----	96.4	87.8	2
3	----	152.1	141.2	----	137.7	135.5#	----	137.3#	----	120.9	99.1	----	3
4	141.7	156.5	144.5#	----	134.5	----	135.8#	134.8#	----	123.8	102.8	----	4
5	155.6	----	----	100.1	135.9	----	136.3	134.5	----	125.6	----	90.9	5
6	159.2	----	----	99.4	125.3	185.7#	128.4	----	117.3	131.9	----	97.8#	6
7	161.0	141.6	130.8	101.7	----	178.9#	131.7	----	115.9	132.8	106.3	100.2	7
8	----	130.2	128.1#	104.1	----	169.1#	122.8	----	115.3	----	102.8#	100.8	8
9	----	121.8	121.6	----	133.2	157.7#	----	142.0	113.4	----	99.3	108.7	9
10	145.2	112.2	115.9	----	144.5#	145.7	----	147.5	----	----	100.6	----A	10
11	138.3	104.9	102.5	103.9	159.5#	----	122.8#	153.9	----	138.7#	----	----A	11
12	138.5#	----	----	108.5	160.5	----	122.1#	153.7#	104.6#	132.4	----	101.1#	12
13	138.8#	----	----	107.3	154.6	128.1	121.9#	----	103.9	132.7	----	100.8	13
14	138.5	89.5	95.0#	108.9	----	126.4#	121.3	----	103.9	132.2#	88.7	93.7	14
15	----	87.3	100.3#	103.6	----	129.1	121.9	133.0	104.9	----	89.0	92.5	15
16	----	89.3	106.4	----	132.1#	128.4	----	131.1	104.6	----	89.8	90.3	16
17	138.3	90.9	116.0	----	130.1	128.7#	----	125.8#	----	110.4	84.9	----	17
18	135.1	96.8	116.6#	124.4	137.3#	----	116.1	121.6	----	103.2	83.5	----	18
19	128.4	----	----	125.5	145.5	----	116.3#	116.7	99.5	102.9#	----	86.1	19
20	120.9	----	----	127.7#	152.6	136.7	123.5	----	99.3	96.3	----	83.0	20
21	114.7	100.6	118.8	133.7	----	146.1	127.8#	----	101.7	89.6	78.5	81.9	21
22	----	----	119.8	140.8	----	148.6	137.0#	110.2	107.0#	----	78.1	81.9	22
23	----	110.1	115.9#	----	----	149.0	----	108.2	110.8#	----	76.0	82.1	23
24	113.3	113.9#	117.9	----	140.2	141.2	----	107.2	----	87.4	77.2	----	24
25	124.3	121.3	113.8#	150.5	139.7	----C	135.0	103.6	----A	88.6	77.3	----	25
26	132.6	----	----	146.2	131.7	----C	127.1#	103.0	115.1	89.0	----	----	26
27	133.5#	----	----	148.0	132.3	134.7#	123.5	----	117.4	88.2	----A	----	27
28	141.1	142.0	102.2	154.6#	----	130.1	127.4#	----	116.7	87.9	85.9	79.2	28
29	----		98.3	148.1	----	130.5	137.5	102.9	113.4	----	87.4	81.3	29
30	----		100.3	----	135.6	124.7#	----	102.0	111.3	----	88.1	81.9	30
31	159.8#		97.3		136.3#		----	103.2		101.1		----	31
MEAN	137.9	120.1	116.7	123.0	140.4	142.0	126.8	124.5	109.0	110.8	89.9	90.5	

ANNUAL MEAN 119.3

SOLAR RADIO FLUX, 10.7 CM
ADJUSTED TO 1 A.U.


C SERIES
— MONTHLY MEANS OF RADIO FLUX
CYCLE 18 19 20 21
MONTHLY HIGH AND LOW VALUES OF DAILY RADIO FLUX
65.0
67.2
67.4
Vertical bars indicate high and low daily values within each month and define the slowly varying component of flux
Dashed curve approximately separates the flux associated with centers of activity from a quiet sun derived as the flux intercept for zero sunspot number in annual plots of daily flux versus sunspot number
Quiet solar flux derived from some radio coronal regions or high resolution solar strip scans. Such regions are associated with x-ray coronal holes
First and last appearance of this basic emission given by horizontal line
Radio minimum is determined by selecting a month with minimum values of the slowly varying component as well as the basic flux
Magnitude of the basic quiet sun obtained as the lowest daily flux value observed during minimum sunspot activity and indicated in cartouche at time indicated

POOR

QUALITY

ORIGINAL